Clinical Lecture
ON
CHRONIC ULCER OF THE STOMACH.[1]

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GENTLEMEN,—During the last five years I have had a number of cases of ulcer of the stomach under my care, whose progress has been so uniformly satisfactory that I desire to draw your attention to the treatment employed. By ulcer of the stomach I mean the round, perforating, simple ulcer which alone has gained the distinction of a separate place in clinical medicine. It is a disease which occurs most frequently in young women, and the series of cases taken from my hospital note-books for the last four years and a half consists, with one exception, of this class:—

No.	Name.	Age.	Occupation.	Duration.	Result.
1	Caroline H.	28	Jeweller.	4 years.	Cured.
2	Eliza H.	20	Penworker.	5 weeks.	,,
3	Emily A.	38	Housewife.	6 months.	,,
4	Ellen R.	20	Penworker.	2 years.	,,
5	Annie S.	20	Clerk.	13 months.	,,
6	Laura H.	22	Schoolmistress.	2½ ,,	,,
7	Emily W.	27	Cook.	6 ,,	,,
8	Florence T.	24	Penworker.	2 ,,	,,
9	Emma H.	32	Housewife.	1 year.	,,
10	Frederick H.	20	Gun-finisher.	3 years.	,,
11	Annie H.	32	Cook.	14 days.	,,

Thus there are ten females to one male, a much greater proportion than that given by Dr. Wilson Fox[2] (two to one). The first case on the list was in the hospital three times before she was finally cured, and Case 4 was in on two occasions, but in both these instances the symptoms had been of long duration before coming under treatment: one year in the first case and two years in the other. The prevalence of the disease amongst cooks has been repeatedly remarked, and in our little series this occupation has two representatives. It will be noticed that three of the girls were penworkers, but this is perhaps attributable to the neighbourhood of several large pen factories. The disease is one which may last many years, and it is quite possible that some of these cases may relapse. I show you here a museum specimen of ulcer of the stomach. The breach of surface is usually about the size of a shilling, with clean-cut edges, as if punched out, but funnel-shaped—that is, wider in the mucous coat than in the submucosa and muscularis. The edges are smooth and destitute of any sign of granulations. It is generally believed that the ulcer is due to thrombosis of a limited vascular area with secondary necrosis and digestion of the dead part by the action of the gastric juice. It is supposed that thrombosis occurs as a result of the state of the blood—e.g., in anæmia,—as the experiments of Silbermann have shown that gastric ulcers may be produced in animals rendered anæmic by artificial means. But it is also thought that localised inflammations may so destroy the vitality of parts of the mucous membrane that the same result follows, and the frequency of the occurrence of the disease in cooks has been attributed to their habit of tasting very hot portions of food. Mechanical injuries to the mucous membrane of the stomach of animals are followed by circumscribed ulcers. Another factor upon which much stress has been laid is excessive acidity of the gastric juice, but it has been pointed out that this is quite as likely to be a consequence as a cause of the ulcer. Tubercle appears to give rise to ulcers quite undistinguishable at least to the naked eye from the simple form. The most important clinical fact is that these patients are generally anæmic and ill-nourished, and this is of great importance when we come to consider the treatment, for the starving method now in vogue is calculated to maintain this unfavourable state of things; while I attribute the success I have met with to the energy with which I have endeavoured to remedy these conditions. Before proceeding to detail the symptoms of this disease I will read you the account of one of the last cases under treatment.

CASE 1. *Gastric ulcer, history of one year's duration with pain, vomiting, and hæmatemesis.*—Emma H——, thirty-two, laundress, was admitted into hospital on June 29th, 1889, complaining of pain in the right hypochondrium and below the left breast, of sickness and hæmatemesis, with cough and shortness of breath.

Family history.—Her father was ill with some chronic affection of the liver, suggesting malignant disease, and her mother had a cancer (?) of the breast. One brother was "consumptive," two were in good health, and one had died aged nine weeks of some wasting disease. A sister had died of consumption, three others were in good health, and one had undergone an operation, probably the removal of an ovarian cyst, at the hands of Mr. Lawson Tait.

Previous history.—She said she had never been strong. No history of acute rheumatism. Had had a bad attack of measles two years previously to admission. Had scarlatina when fifteen years of age. For the last two years had been short of breath on exertion. She had been married thirteen years, and had had three children, one of whom died at the age of two, having never been able to walk. From the age of nineteen to twenty-two she suffered from "fits," which she attributed to a fright. She had an enlarged thyroid, which used to get bigger at her monthly periods, but she did not think it had increased lately. For the last year she had not menstruated.

History of present illness.—About a year ago she had noticed a swelling on the right side of the abdomen, which caused her pain on sitting. One day she was seized with a sudden pain in the abdomen, and fainted. A doctor was sent for, and on recovery she was told that she had passed about a quart of blood from the bowel. The pain in the tumour continued, and a fortnight later she vomited blood, as much as a pint on one occasion and half a pint on another. For several months before this she had been sick at times. This occurred ten weeks before admission, and since that time she had vomited blood two or three times a week, and food continually.

Present condition.—She was a thin woman, with a fair amount of colour from dilated capillaries in the skin of the cheeks. She said she had been much stouter up to six months ago. Temperature 98·5°.

Alimentary system.—Teeth defective, more than half their number having disappeared. Tongue pale, flabby, with irregularly distributed fur on the dorsum. Appetite poor. Complained of pain in the right iliac region, which prevented her lying on that side. Pain after food, coming on at once, and lasting about an hour. Tenderness general over the abdomen, but most marked in the right iliac region and under the left breast. Vomiting not constant. No obvious dilatation of stomach. Bowels regular of late. Liver dulness in vertical nipple line two inches. No tumour to be felt anywhere in abdomen.

Circulatory system.—Impulse heaving, no thrill. Apex beat diffused, area of cardiac dulness limited by vertical nipple line to the left; a booming systolic murmur at the apex conducted into the axilla, with accentuation of the pulmonary second sound. Occasional palpitation and shortness of breath on exertion. Pulse small, regular, fair tension (72).

Respiratory system.—Respirations 24; percussion and auscultatory signs normal.

Urinary system.—No pain or discomfort or undue frequency in micturition. Urine, 40 to 50 oz. daily, sp. gr. 1015, acid, no albumen, sugar, or bile.

Generative system.—Had not menstruated for twelve months.

Treatment.—Milk and lime water, one ounce every hour. The following mixture was ordered: one drachm of sulphate of magnesia, five grains of sulphate of iron, ten minims of dilute sulphuric acid, to one ounce of peppermint water; to be taken three times a day.

Progress of case.—She did not vomit after admission, and the only alteration in her treatment was to adjust the quantity of sulphate of magnesia to the requirements of her bowels. July 6th: She was allowed bread-and-milk.—8th: Two eggs were added.—11th: A light pudding was ordered.—14th: Milk, boiled chicken, light pudding.—17th: Mutton diet. The mixture at this time caused

[1] Delivered at the General Hospital, May 21st, 1890.
[2] Reynolds' System of Medicine.

rather profuse diarrhœa, which continued after it was stopped, but rapidly subsided on a diet of milk and lime water and the use of the bismuth mixture. She was only on this treatment for one day.—23rd: Discharged cured.

This case, although it presents some unusual features, perhaps not attributable to the stomach lesion, is, on the whole, a good example of the disease. What the "tumour" was must remain doubtful, as no tumour was found in the abdomen, and it is possible that there never was one. It is certainly most likely that the hæmorrhage was from the ulcer, and had nothing to do with any tumour, although she supposed it had. The chief symptoms by which the presence of ulcer of the stomach may be recognised are (1) pain directly after food, (2) vomiting soon after taking food, and (3) hæmatemesis. Unless these are present the diagnosis is doubtful, and of these the most important is hæmatemesis, which was absent in only one of the cases I have included in my list. Nevertheless, ulcer of the stomach may be present in a latent state without giving rise to any of these symptoms, and perforation may occur without any history of previous gastric trouble. We will look into these three cardinal symptoms a little more closely. Pain was present in all my cases. It was usually described as "burning" in character, sometimes as "sharp and piercing," or "dull and gnawing," but I think "burning" is to be borne in mind as the typical form of the pain. The pain can be localised by the patient, who can point out the precise spot. It was usually referred to the epigastrium or lower end of the sternum, less often under the left breast, or even in the right hypochondrium. I saw a case in consultation recently, proved by post-mortem examination to be one of ulcer of the stomach, in which the pain was referred to the region of the gall-bladder and passed down to the right. The pain was always worse after food in all but one case, and in that it was so sometimes; but in the case just referred to the patient, a gentleman aged fifty-three, expressed himself as invariably in less pain after taking food. This is quite exceptional, and only illustrates the difficulty that may occasionally occur in diagnosis. Vomiting after food with relief to the pain is not a very constant symptom, and is much more characteristic of hysterical gastrodynia. It was absent in five out of these eleven cases, and is only stated in one case to be frequent. This is a point well worth bearing in mind. Hæmatemesis was present in all but one case, Emily W—— (No. 7), and I attach so much importance to this symptom that I admit that the diagnosis of that case is doubtful. When the quantity is large the blood may be bright and unaltered, but when it is small in quantity and has remained some time in the stomach it becomes darkened in appearance, resembling coffee-grounds. Beef-tea, cocoa, and preparations of iron &c., may produce somewhat similar appearances. The distinction can only be made by the spectroscope or by testing for hæmin crystals. This is done by drying the material to be examined on a glass slide, powdering it, adding a crystal of common salt and a few drops of glacial acetic acid, and heating gently, when hæmin crystals will be discernible by the microscope if blood is present. It is, however, of the utmost importance that the actual fact of the blood coming from the stomach should be placed beyond doubt, for it is not uncommon to be told by hysterical patients or their friends that vomiting of blood has taken place, yet when carefully observed this resolves itself into blood-stained saliva caused by sucking the gums, from carious teeth, &c. It is a symptom of such importance that you should always see the vomited matter yourselves, and not trust to any report from attendants. If you are told that hæmatemesis has occurred recently, you should carefully examine the stools, because it is almost certain that some of the blood will have passed into the intestine, and will give rise to the characteristic tarry stools. Here, again, you must bear in mind that iron and bismuth blacken the stools, and if under treatment the patient may very likely have been taking one of these drugs; but the blackening from blood is far more intense than that produced by either of these metals, which are usually present in only small quantities. While in the absence of hæmatemesis the diagnosis of ulcer of the stomach is incomplete, it may also be said that where profuse hæmatemesis occurs ulcer of the stomach is almost certainly present. Such profuse hæmorrhage may, however, occur from (1) rupture of varicose œsophageal veins in cirrhosis of the liver, (2) rupture of an aneurysm into the œsophagus or stomach, and (3) cancerous ulceration of the stomach; but, as a rule, in cancer the hæmorrhage is not profuse, and gives rise to coffee grounds vomiting.

Those cases of cirrhosis of the liver in which profuse hæmatemesis occurs are not uncommonly just those which may have hitherto remained latent owing to the great development of the collateral venous circulation having prevented the occurrence of ascites. Under these circumstances the patient may appear in good health up to its occurrence, which may be at once fatal. The diagnosis must depend upon (1) the reduced size of the liver as made out by percussion, and (2) the absence of gastric pain, &c. The latter is of less value; for I remember a case in ward X of sudden fatal hæmorrhage from a gastric ulcer which had remained quite latent, the patient being under treatment for phthisis. There were tubercular ulcers in the intestine, and the stomach ulcer was probably tubercular in its origin, though it presented all the appearances of a simple ulcer. Assistance in diagnosis is also obtained from the sex and age and habits of the patient, though these are not entirely trustworthy. The rupture of an aneurysm is almost invariably immediately fatal; so that if it has not been diagnosed before, it will probably not be discovered, though it may be suspected where the hæmorrhage is very profuse. There is not a very uncommon position for an aneurysm behind the stomach arising from the abdominal aorta just as it emerges through the diaphragm, and such aneurysms are exceedingly difficult to recognise. A thoracic aneurysm rupturing into the œsophagus might be expected to have revealed itself beforehand by pressure and other signs; but it must be admitted that small aneurysms of the descending aorta may exist without giving rise to any symptoms by which they can be diagnosed; fortunately they are not very common.

Cancer of the stomach, if seated in the pylorus, causes a tumour which can be felt, while cancer of the cardiac end usually gives rise to symptoms of œsophageal obstruction, which, taken with the age of the patient, the cachexia, and the moderate nature of the hæmorrhage, will permit a correct diagnosis. Fortunately neither cirrhosis of the liver, aneurysm, nor cancer is liable to occur in young women; and it may comfort you to know that you may diagnose ulcer of the stomach in this class of patient from hæmorrhage alone, with little fear of making a mistake. But without hæmatemesis the difficulties are great, especially great in this very class, for it is among them that we meet with nervous vomiting and gastrodynia, symptoms which I am convinced are constantly incorrectly attributed to ulcer of the stomach. This is all the more unfortunate as these patients do not get well, but go from bad to worse, if starved and treated with bismuth and nitrate of silver. But I claim that my plan of treatment has the advantage in a doubtful case that it is applicable to either condition.

The following case is a good example of this affection:—

CASE 2. *Gastrodynia, pain, vomiting, anorexia; no hæmatemesis; history of hysterical fits; amenorrhœa.* — Edith M. J——, aged fifteen, admitted on Nov. 15th, 1889, complaining of pain in the stomach, sickness after everything she takes, even after water, for the last two years.

Family history.—Father, aged forty-seven, in good health; mother, aged forty-five, subject to "sick headaches"; one brother died in infancy; another brother and a sister living and healthy. Patient had a good home and plenty of food.

Previous history.—Had "low fever" when a child. Six years ago she broke her right humerus and dislocated the shoulder in a fall from a swing. A year later she dislocated her left elbow in a fall when walking; three years ago for six months she suffered from "struggling fits," without loss of consciousness, which occurred about every two weeks. In August, 1889, she was in Wolverhampton Infirmary with "inflammation of the right hip," but it got quite well six weeks after leaving that institution. She had been a total abstainer for six months.

Present illness.—Two years ago she began to suffer from vomiting and headache, without nausea or pain. There was never any blood. The vomiting generally occurred immediately after taking food. This lasted about a month, and three months later she had a second attack, followed by others at intervals up to the present time. This attack began two months before admission; but for the last three weeks she had suffered pain in the epigastrium, coming on directly she had taken food. There had also been some nausea. By lying down she had managed to control the vomiting to some extent.

Present condition.—A well-developed, well-nourished girl, looking more than her age. Temperature 98·3°.

Alimentary system.—Lips pale; teeth, some molars decayed; tongue pale and moist; disagreeable taste in mouth; no appetite; marked thirst; complained of pain after taking two ounces of milk and lime water; the pain was increased by pressure and lasted a quarter of an hour. The pain was localised to a spot the size of a crown-piece, and the tenderness was manifested on very slight pressure. Bowels confined. Liver dulness, three inches and a half.

Circulatory system.—Apex beat in fifth left interspace, sounds normal. Pulse regular, rather weak, compressible (78).

Respiratory system.—Respiration 16; percussion and auscultatory signs normal.

Urinary system.—Urine 1012, acid, no albumen, sugar, or bile.

Generative system.—Has never menstruated.

Treatment.—Two ounces of milk and lime water, reduced next day to half an ounce every hour; the following mixture was ordered, to be taken three times a day,—five grains of sulphate of iron, one drachm of sulphate of magnesia, ten minims of dilute sulphuric acid, one ounce of peppermint water.

Progress of case.—This treatment was continued except that the dose of sulphate of magnesia was increased or diminished as found necessary, according to the state of her bowels.—Nov. 21st: No vomiting after the half-ounce doses of milk and lime water were instituted, but she complained of pain. One ounce of bread-and-milk every hour.—24th: Sick this morning; still in pain. A piece of lint soaked in liquor epispasticus applied to epigastrium.—27th: No more sickness; pain better. Ordered house diet.—Dec. 7th: Discharged cured.

The points in this case worth noting are—1. The history of other nervous affections. 2. The age of the patient, which is less than that at which gastric ulcer usually occurs. 3. The persistence and frequency of the vomiting, which followed everything, even water. As already pointed out, vomiting in ulcer of the stomach rarely occurs after every meal, and it is very exceptional to find the stomach so irritable as to reject all food. So much has this impressed itself upon me that I would ask you to pay special attention to this point. 4. The localisation of the pain, which is usually given as a sign of some value in ulcer of the stomach, but which evidently must not be too strongly relied upon. 5. The absence of hæmatemesis. 6. The beneficial effect of a small blister, so often observed in nervous pain. 7. The very rapid recovery of the patient under appropriate treatment.

If you will bear in mind the teaching of this lecture I have no doubt you will recognise the majority of cases of gastric ulcer that come before you, while you will also avoid the mistake of treating stomach neuroses too seriously; but I should not be doing my duty if I did not warn you that ulcer of the stomach may occur under quite different circumstances from those which I have told you are typical. About this time last year I saw with Mr. Pearse of Brierley Hill a gentleman who complained of pain in the right hypochondrium relieved by food. He was about fifty-three years of age, very careful in his habits, but a great worker and sometimes irregular in taking food. The pain was described as burning and as radiating down towards the anterior superior spine of the ilium. Physical examination revealed nothing. The case was regarded as one of gastrodynia, the diagnosis being based on the relief to pain by taking food and the absence of other indications. He improved greatly on a mixture containing hydrochloric acid and strychnine. During the winter he got very constipated, his pain returned and increased. Mr. Pearse saw him, and with some difficulty removed a lot of scybalous fæces from his bowel, but the pain continued, and he was said to have passed a gall-stone and to have been slightly jaundiced. When I saw him I heard this history, but I heard too that he had on two occasions vomited some coffee-grounds matter. I confess that I did not attach proper importance to this symptom. Relying on the history, I agreed in the diagnosis of biliary colic, and was greatly astonished to hear next day that he had died in the night, evidently from internal hæmorrhage. So far was I from recognising the true nature of the case, that I then believed that death was due to the rupture of an aneurysm which had previously leaked into the stomach. Yet a post-mortem examination showed that the hæmorrhage had come from a simple round ulcer on the posterior wall of the stomach, near the greater curvature and midway between the cardiac and pyloric openings. This case does not show the consultant in a very favourable light; but our failures are often the most instructive as well as the most impressive cases. The points of interest are: (1) the seat of the pain, which was not explained by the position of the ulcer; (2) the relief to the pain after taking food, so directly opposed to what we should expect from an ulcer, though I have already told you that we had the same statement in another case (No. 1 in list); and (3) the absence of hæmatemesis until within a few weeks of the termination of the case. I need hardly remark upon the difficulty created by the statement that there had been slight jaundice, followed by the finding of a gall-stone in the fæces. Altogether it was a very puzzling case, and I hope you may not have many such to deal with.

Finally, I must say a few words about treatment, though you have already heard the details in the accounts of the cases submitted to you. As a general rule, I order at first half an ounce of milk and lime water every hour as the only food, with the sulphate of iron and magnesia mixture in purgative doses three times a day. Ziemssen and Leube use sulphate of soda or Carlsbad salt in purgative doses, with the object of removing all remains of food from the stomach; but I use this mixture simply to remedy the anæmia and constipation so generally present. If hæmatemesis actually occurs, or the patient is admitted with a very recent history of it, I order ice to suck, and feed per rectum for a day or two, and then proceed as before. When, as usually is the case, vomiting and pain cease under this treatment I double the allowance of milk and lime water, then change the diet to soft bread-and-milk, getting on through pounded chicken and custard and eggs to ordinary diet as rapidly as possible. The good results are attested by the table. It may be objected that these cases are not cured, but that there is only a temporary remission of the symptoms. I do not think this is true, although one case did undoubtedly relapse three times, as all these patients were made out-patients under me, and attended for a longer or shorter time, continuing to take the medicine. Had they relapsed it is most probable they would have reapplied for admission to this hospital, where, according to the rules, they would have been placed under my care. It may be thought that there is danger by this plan of exciting hæmorrhage or causing perforation, but I think this fear is sufficiently answered by the record.

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ON

KOCH'S TREATMENT OF TUBERCULOSIS.[1]

BY THOS. WHITESIDE HIME, A.B., M.D., &c.

DR. HIME stated that he had felt great reluctance in accepting the complimentary invitation of the secretary to deliver an address to the Society on the above subject—first, because he hardly felt competent to deal with so important a matter in the brief time available; and secondly because, so far as he could ascertain, everyone he met seemed to have his mind definitely made up with regard to the whole question. He had heard many medical men in Berlin, who had been treating cases of tuberculosis by Koch's method ever since the liquid was in use, say that they must postpone giving a definite opinion as to its merits until sufficient time had elapsed to make it possible to speak with certainty. But he had met only very few persons who had never seen a case at all who had not made up their minds, and who were not generous in imparting their conclusions on the subject. Professor von Bergmann said in his last lecture at Berlin that it might be January, 1892, before he

[1] Delivered before the Bradford Medico-Chirurgical Society. The lecture was illustrated by photographs thrown on the screen by a magic lantern, showing patients at different stages of treatment; and two patients suffering from lupus were also shown, which were under treatment.

would be able to pronounce his judgment, although he had treated a great number and variety of tubercular cases by Koch's method. But the writer in the *Eatanswill Gazette* was less timid. He did not hesitate to denounce the whole proceeding as a dangerous imposture, and to declare that where a person died under Koch's treatment the doctor who had employed it should be indicted for manslaughter! And such trash was read with avidity by the million, and unfortunately also by medical men sometimes. Was it any wonder that research in such departments of science was at the lowest conceivable level in this country when the press provided such instruction for the public? Even some medical men, after a day or two in Berlin, thought it becoming to write authoritatively to the lay press on the subject—some against it, others (equally incompetent) in its favour. However, as he had enjoyed special advantages for studying the whole subject while acting as Special Commissioner for THE LANCET, sent to Berlin to report, and had also had some personal experience in the employment of the methodof Koch in his own practice, he would endeavour to lay before them such points as seemed to him likely to be of interest and value. His knowledge of the subject was mainly due to the opportunities afforded to him by the physicians and surgeons in charge of cases in Berlin, and he wished to say how greatly he and thousands of other medical men were indebted to their German colleagues for their never-failing courtesy and kindness. There was, indeed, no limit to the cordiality shown and the opportunities afforded for studying this most interesting and novel subject; and although it might seem invidious to name anyone as more distinguished than his colleague for this good fellowship, still he thought it right to give utterance to the common feeling of gratitude felt to Professor von Bergmann for his lavish expenditure of time and attention on importunate, and often inconsiderate, foreign medical visitors. The importance of the problem which Koch had undertaken to solve none would deny. It is nothing less than that of victoriously assailing the microbe of the most deadly of all diseases, and rescuing its victims already enfeebled by its deadly assault. Undoubtedly tuberculosis is the most terrible of all the diseases in the nosology, not only from the great number of its victims, but also from attendant circumstances. It was estimated that one-seventh of the human race perished annually from this cause alone.[2] The death-rate in England (1888) per million persons from phthisis alone was 1540; from tabes, 236; and from "other tubercular diseases," 406; the actual deaths from phthisis being 44,248, and from "other tubercular diseases" 18,434, or altogether 62,682. Against this may be set the whole class of zymotic diseases, which only caused 40,000 deaths, in order to see the relative magnitude of the fatality from tuberculosis, which attracts very little attention, and from zymotic diseases, which seem to absorb the whole energy and attention of sanitarians and of the public. If a death occurs from diphtheria or typhus fever in a street, what an excitement! The inspectors even of the Local Government Board are immediately set in action, and a report is soon presented to the authorities. Yet the total deaths in England in 1888 from typhus fever were only 160, and from diphtheria 4815, as against 62,682 from tuberculosis. The columns of the leading papers are frequently filled with alarming letters as to the prevalence of diphtheria, as evidenced by perhaps a dozen cases within a few weeks, and a score of deaths in a year in some locality; yet during the same period thousands have suffered and died from tuberculosis without even a passing comment from anyone.

The magnitude of the evils arising from the prevalence of tuberculosis was greatly increased by the terribly long duration of the disease, which caused its economic importance to be so much greater than that of almost any other disease, and by the fact that adults, the most effective portion of the population, suffered so largely. It was cruel enough to see young children swept off rapidly by measles, whooping-cough, and other diseases, but it was far worse to see their parents and adult brothers and sisters slowly gnawed away by the relentless bacillus of tuberculosis. The modern discovery that the tuberculous patient is a source of infection to those around him during the long, weary years of his wasting disease, certainly has not robbed it of any of its terrors, although the discovery, no doubt, will ultimately lead to precautionary measures and protection for those exposed to the risk. Up to the present time it must be admitted that practically we had been helpless against tuberculosis. Medical science had devised little more than uncertain methods of giving general tone and vigour to the tissues of the patient by good food, air, tonics, exercise, &c., so as to assist it in resisting the inroads of the organism of the disease. It is unnecessary to particularise the extent of the success attained. But certainly no scientific method of contending against the disease had been even plausibly suggested until the present. Indeed, only a few years ago a distinguished authority gave a reason for the theoretical impossibility of devising a "protective" against tuberculosis—viz., the fact that one outbreak of tubercular disease does not protect against a second or further one.[3] Suddenly, it may be said, all theories and opinions on this subject have been subjected to a rude shock, and in a most unexpected manner. The excitement and enthusiasm aroused by the announcement that Koch had discovered a successful method of dealing with tuberculosis have surpassed all similar occurrences. Within a few days of the announcement of the discovery thousands of medical men, including many of the most distinguished in every land, had abandoned their professorial and private work, and in the depth of winter were pilgrimaging to Berlin to see with their own eyes the new method in operation, and with a vague hope of bringing back some of the liquid for use at home. The goal set before himself by Koch was one very different from the other "protective" methods hitherto in use. Jenner had introduced to the world a method of preventing small-pox, which consisted in giving to a person an attack of a mild disease, analogous to, and probably identical with, small-pox.[4] This artificially imparted disease protected against small-pox more or less completely, small-pox being a disease which rarely recurs in the same individual, and the preventive disease (vaccinia) having the same characteristic. The remarkable discoveries which were made by that great genius Pasteur in this realm of science depended for their success in protecting animals against certain diseases on the power to attenuate the virus of those diseases, to effect which he employed various means. The attenuated virus was sufficient, when inoculated on an animal, to give it a mild attack of the disease; and as it was one which did not usually recur, this one mild attack was found sufficient to protect the animal against a subsequent attack. The reality of the protection which Pasteur had been able to secure was indubitable, but it was not permanent in the case of all diseases. He had succeeded in attenuating the virus of fowl cholera by simply keeping it exposed to the air, while protected from other organisms. Inoculation with this attenuated virus was protective against the strongest virus. On March 21st, 1881, Pasteur, Chamberland, and Roux presented a memoir to the Academy of Sciences in Paris, showing how, by cultivating anthrax bacilli at 42° to 43° C. for a certain time, the culture might be inoculated on animals without serious danger, and afford them protection against the strongest virus. The animals became feverish and ill, but not seriously so except in a small proportion of cases. These great discoveries of Pasteur had been further worked out by others on the same lines, and "vaccines" had been obtained capable of protecting against several diseases. The duration of the protection obtained against rabies had been experimentally proved to be at least five or six years, as some of Pasteur's

[2] The commonly received opinion that generally phthisis kills most victims between the ages of five and thirty-five has been shown by Würzburg to be true only of the total number of deaths, but not true of the *proportion* of deaths to those living at various ages. He shows from large material that the highest mortality is of persons aged from sixty to seventy years (per 100 living of that age), and the lowest of persons from five to ten years (Mitt. aus d. Kais. Gesundheitsamt., B. ii.). In England (mean for 1871–80) the highest rate (3745 per million) occurred among persons of thirty-five to forty-five years of age; and the lowest rate (358 per million) among children aged five to ten years. Klebs (Allgem. Pathologie) considers this greater prevalence of phthisis in advanced age to be due to the [illegible] diminished vitality of the cells, which yield to the attack [illegible] cle bacilli more easily than at more vigorous ages.

[3] Zum derzeitigen Standpunkt d. Lehre von den Schutzimpfungen. Von Prof. Naunyn. Leipsic. 1886.

[4] There are the strongest grounds for believing that vaccinia may be imparted to the calf by inoculation of human small-pox. Hence vaccinia is to be regarded as variola modified by passage through a bovine; just as Pasteur and Thuillier attenuated the virus of swine Rothlauf by passing it through rabbits, whereby it was rendered harmless (and protective) to swine, though still continuing fatal to the rabbit. Similarly, Pasteur found that the virus of canine rabies passed through apes in series becomes gradually so attenuated as to lose the power of infecting dogs; while passage through rabbits in series greatly intensifies its activity.

protected dogs have resisted repeated efforts to infect them either by subcutaneous, intravenous, or subdural inoculation within that period. The anti-rabic method differed from all the others in that there was no evidence whatever of a morbid condition being produced in either men or animals during the production of the refractory state.

Koch's anti-tubercular method was something different from all these. He did not endeavour to protect against tuberculosis by giving a mild attack of that disease; nor did he seek to cure the disease by injecting a different form of bacillus, as had been done successfully by Emmerich, who injected the streptococcus of erysipelas as a protective against anthrax; and by Pawlowski, who successfully injected the pneumococcus of Friedländer with the same object. Koch injected a liquid, the nature of which had not been made known by him,[5] subcutaneously, and produced an intense reaction thereby, but he certainly did not give the patient a mild attack of tuberculosis. The liquid contained no specific organism, certainly no living tubercle bacilli or their spores, attenuated or other. It undoubtedly did find out and produce a most remarkable series of changes in living tubercular tissue wherever it was visible, and there was every reason to believe that in other situations withdrawn from view the changes produced were similar to those seen in lupus, tubercular joints, and other more or less external forms of tuberculosis.

It seemed to be the general idea that Koch's discoveries on this subject were limited to having found out a substance for which he claims the power of destroying living tubercular tissue. But he has done far more than this. In the first place, in his address to the International Medical Congress[6] he claimed *not* to have discovered such "a substance," but "substances" which are capable of checking the growth of the tubercle bacillus not only in the test-tube, but also in the animal body, without injury to the latter. The importance of this fact, that Koch has discovered more than one substance endowed with this property, should not be overlooked. For we have thus the possibility of utilising other substances than that which is known as "Koch's lymph," and possibly with as good or better effects. But another great fact has been so overshadowed by the curative aspect of the discovery as to have also been lost sight of—namely, the fact that Koch has been able to render animals refractory to inoculation with virulent tubercle. This discovery would have immortalised any other man; but seeing that Koch has also discovered how to stamp out tuberculosis in animals suffering from that disease, and that his method was being employed with a view to save human beings suffering from the same disease, people have quite lost sight of this other great discovery. We may happily congratulate ourselves that Koch has declared that his "work is not yet finished," and hope that other great discoveries will result from his continued activity. The power of successfully "vaccinating" animals so as to render them refractory to subsequent inoculation with tubercle has also been claimed by Richet of Paris. He had obtained immunity by means of injections of culture media of tubercle bacilli which had been sterilised by heating above 100° C. From two observers, working manifestly in different ways, we had thus obtained the same great result, the possibility of rendering animals refractory to inoculated tubercle. As an illustration of one practical application of this discovery, he would mention that he had been consulted by a gentleman as to the desirability of employing Koch's method as a prophylactic in the case of two children. They were orphans, not obviously tubercular, children of parents both recently dead from phthisis, the mother having been in an advanced state of that disease during her pregnancy, shortly after the termination of which she died. The proposal was one of great importance and interest, but he had hardly satisfied himself as to the answer to be given, though at present he thought that he ought to yield to the request which had been put to him, as these poor orphans, according to all experience, are most probably highly susceptible to tuberculosis.

Koch's liquid had been so frequently described, correctly and incorrectly, that Dr. Hime would merely show it and let them judge of its appearance &c. The mode of its application was the same as that of any other subcutaneous injection. It was certainly desirable to use for this, as for all operations, sterilised instruments, and ones which were accurately graduated. Koch's syringe having no piston, was freed from one source of danger. The pistons provided with plugs of leather or other absorbent material were liable not only to retain dirt of various kinds, but also considerable quantities of potent drugs, such as morphia, which had been used. Further, everyone had found such pistons frequently dry and unusable when wanted. Koch's syringe was free from these disadvantages. It was important that the indiarubber ball should not be too thin and weak, and in using it one should be careful not to force air into the tissues; even if aseptic it might cause trouble. The accurate graduation of the syringe, when so powerful a substance as Koch's liquid was being injected, was a matter of the first importance. It was a tremendously powerful substance. An ordinary injection represented 0·001 mgr. of the liquid. He had it on the best authority that this probably contained only about one-thousandth part of active material, or about the fifteen-millionth part of a grain! Yet this infinitesimal fraction could set the whole body of a man weighing 15 st. in such a state of change that the whole was raised to a temperature of 104° to 105°F. The weight of the mass thus affected was infinitely greater than that of the active agent, the exact proportion being about 1 to 98,000,000,000! That extreme accuracy was needed in dealing with such a substance was evident, but the syringes in the market were certainly not all as accurately graduated as they should be. The lecturer could strongly recommend the syringe of Strohschein, which had no piston or indiarubber ball, and was a marvel of ingenuity and cheapness. It was a pity that two different ways of describing the quantity injected had slipped into use, some persons giving the volume, or portion of a cubic centimetre used; others the weight in milligrammes. The latter seemed the preferable standard. The place selected for the injection was a mere matter of convenience. Koch had suggested the loose skin between the shoulder-blades and the lumbar region as being almost painless and otherwise suitable.

The noticeable results following the injection have been grouped together under the term "reaction." The reaction is a highly complex combination of phenomena, some local, and affecting only parts which are infected with tubercle, others indicating more a general affection. It was quite erroneous to regard the temperature as constituting the reaction, or even as being its main feature. There is usually no reaction whatever at the site of the injection. Frequently, even in cases of strictly limited lupus, where the lungs are perfectly sound, the earliest indication of the system being affected is a short, dry cough, which may come on as early as half an hour after an injection, even in persons absolutely free from pulmonary disease. It is more like the attempts of a person to cough who has no cough than anything else. It may be pretty constant and annoying, but generally is not sufficiently accentuated to be so. It rarely lasts longer than two hours or thereabouts, and it gradually subsides before disappearing. On the other hand, the local reaction affecting the parts where there is living tubercular matter may come on before there are any decided indications elsewhere showing that the injection is taking effect. This observation of Dr. Hime's harmonised with that of Dr. Lindner of Berlin, who says[7] that general constitutional reaction is not always observed where there is local reaction. Dr. Hime had noticed very trivial general effects occurring long after the local reaction had come on, and when, in fact, it was passing off. Dr. Lindner is also of opinion that a general reaction never is observed in cases where there is no local reaction, but Dr. Hime could not confirm this. On the contrary he had seen general, without local, reaction occur. It may happen, indeed, that no reaction, either local or general, will follow the first small injection. Again, there may be none until several and increasing injections have been given, and then rather suddenly and unexpectedly there may be a considerable general and local reaction. This non-occurrence of a reaction after one or two, or even more, injections must not be regarded as indicating either indifference to Koch's liquid or the absence of tubercle. It is possibly due to the fact that for some reason the tubercular deposits are so situated and circumstanced

[5] An account of its mode of production has been published by Koch since this lecture was delivered.

[6] Aug. 4th, 1890; translated by T. W. Hime, M.D., and published by Baillière, Tindall, and Cox. Koch's own words are: "Ich habe schliesslich *Substanzen* getroffen, welche nicht allein im Reagenzglase, sondern auch im Thierkörper das Wachsthum der Tuberkelbacillen aufzuhalten im Stande sind." He adds, further on: "Wenn man sie [meerschweinchen] der Wirkung einer solchen Substanz aussetzt."—U. S. W.

[7] Lecture delivered Dec. 8th, 1890, before the Gesellschaft. f. ö. Gesundheitspflege, Berlin.

that the injected material does not readily act on them, and that the products of that action, when established, do not readily enter the circulation. For it seems probable that the fever and many other elements of the state known as the "reaction" are due to the absorption of tissue disintegrated at the seats of disease by the influence of the injected "lymph" and taken up into the circulation. That similar general symptoms are induced by such an occurrence is familiar under other circumstances, notably high bodily temperature being thus induced. Depage of Brussels assumes that the injected material contains an agent, ptomaine or other, which combines with the ptomaine of the tubercle in the blood of the injected person. The general phenomena of reaction he regards as being due to the introduction of this substance in the blood, and partially to its combination with the small quantity of tubercular ptomaine circulating in the blood. But only very exceptionally did the injected "lymph" produce reaction, except in tubercular patients.

FIG. 1.

J. C.: Lupus of the face of seventeen years' standing. Before injection with Koch's liquid. (Under the care of Dr. Hime, Bradford.)

FIG. 2.

J. C. at the height of reaction, seventeen hours after the first injection of Koch's liquid (0·001 mgr.). (Under the care of Dr. Hime, Bradford.)

The appearance of the reacting part is very peculiar and characteristic. In order to give those colleagues present who have not seen such as vivid an idea as possible of what great changes may occur, Dr. Hime produced on the screen two likenesses of a patient he was treating for lupus—one showing him before treatment, the other taken seventeen hours later, when he was in the height of local and general reaction, with a temperature of 103°. The features are greatly distorted, owing to the extensive swelling of the nose, upper lip, and part of the left side of the cheek, the eyelids, and the skin between the eyebrows, the parts affected with tuberculosis. The patient had been surgically treated for the disease at the Leeds Infirmary by the late Mr. M'Gill more than once. Under the right eye was a whitish scar, where he was last "gouged"; above the left side of the mouth was another cicatrix (neither very distinctly marked in the drawing). The two upper lids were red and puffed before treatment, and made him at first fear some kidney mischief might coexist, which was found to be the case. There was a roughened, reddish condition of the skin between the eyebrows, which, however, showed no specific characteristic whatever. All these parts reacted markedly to the first and several subsequent injections. The small scar under the right eye, however, only reacted at one point, which shot up red and swollen from the surrounding white tissue. This would suggest the almost complete success of Mr. M'Gill's attempt to eradicate the disease at this point. Several small spots on the right upper eyelid reacted, and have since sloughed out and apparently healed perfectly. The same has occurred at the spot above the left side of the mouth. The place between the eyebrows swelled and became red, and this was repeated after several injections; but there has never been any formation of scab, and Dr. Hime thought that the disease, though undoubtedly present, was very limited and superficial. There was no local reaction whatever in any part of the patient's body, except those connected with the face.

(To be continued.)

REMARKS ON

THE OPERATION OF ILEO-COLOSTOMY FOR ORGANIC DISEASE OF THE CÆCUM, CAUSING OBSTRUCTION.

BY FREDERIC BOWREMAN JESSETT, F.R.C.S. ENG.,
SURGEON TO THE CANCER HOSPITAL, BROMPTON.

I WAS much interested in Mr. Bryant's able and instructive paper on "ileostomy" for organic disease of the cæcum, which appeared in the columns of THE LANCET of Jan. 15th. That such an operation as he describes may be the means of relieving some of the urgent and distressing symptoms of obstruction, as well as of prolonging life, cannot be disputed, but the question arises, by adopting such an operation, does the surgeon place his patient in the best obtainable position during the remainder of his life? It is on this point I wish to make a few remarks, and I

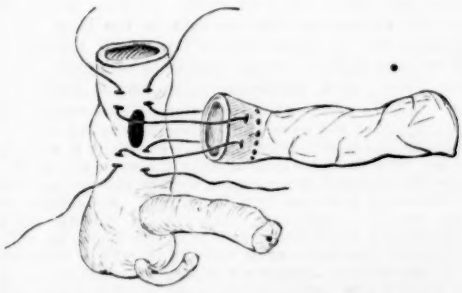
shall endeavour to show that the operation of ileo-colostomy in all cases, excepting when the patient is so reduced and exhausted as to render such a measure undesirable, is preferable to ileostomy. The following case illustrates well what I mean.

On August 2nd, 1889, Dr. Hayes of Basingstoke asked me to see a gentleman with him suffering from a tumour which occupied the right iliac fossa, extending upwards to within two inches of the false ribs, and forwards to nearly an inch beyond the right linea semilunaris. The patient had suffered considerably from time to time from irritation and discomfort of the bowels. During the two months previously to my seeing him he had been much worse; he complained of constipation, alternating with irritating diarrhœa, general uneasiness, and great pain. He had been seen by a physician, who pronounced him to be suffering from epithelioma of the cæcum, with which diagnosis I fully agreed. The patient was a tall, spare man, over fifty years of age, with sallow complexion and good pulse. He had been losing flesh rapidly, and was very low. The bowels had not been opened for some days. The abdomen was somewhat tympanitic; but he complained of no tenderness excepting over the tumour. A tumour was discovered occupying the situation above described; hard and somewhat firmly fixed. As the symptoms were urgent, I suggested that the abdomen should be opened, and we should be guided by circumstances what operation should be performed to relieve the patient of his distressing symptoms. The removal of the growth appeared to be impracticable, and I explained to the patient and Dr. Hayes that I should be prepared to perform ileo-colostomy by implanting the ileum into the transverse colon, and by such means trusted that the remaining term of his life might at least be made more endurable. On August 3rd, with the assistance of Dr. Hayes and Dr. Purcell, Dr. English giving the anæsthetic, I opened the abdomen by an incision about three inches long over the right linea semilunaris, all bleeding points being caught with pressure-forceps. I opened the peritoneum along the whole length of the incision, and immediately came down upon a large mass of disease, extending from the cæcum nearly as high as the transverse colon. It being quite impossible to remove this I determined to divide the ileum and implant the proximal end into the transverse colon. Passing the index finger of the left hand along the inner side of the cæcum, a portion of ileum, close to the ileo-cæcal valve, was easily drawn out of the wound; I then passed two pieces of indiarubber cord lightly round the intestine, about four inches apart, the piece on the distal end being placed about two inches from the ileo-cæcal valve; I next divided the intestine completely across, between the two indiarubber ligatures, caught up and ligatured all bleeding points, and washed the divided ends thoroughly. The cut end of the distal part of the ileum was inverted and closed, by stitching together the peritoneal covering with a fine silk suture. The next step in the operation was to line the proximal end of the divided intestine with a thin band of indiarubber, about half an inch wide, which was fastened by a continuous catgut suture to its cut edge. Two chromicised catgut sutures about eighteen to twenty-four inches long, and armed at each end with a needle, were next passed through the indiarubber band and all the coats of the intestine from within outwards. The posterior threads were passed one on either side of the mesentery, and the anterior threads at equal distances apart through the convex surface of the bowel. A portion of the transverse colon was next brought out of the parietal wound and a longitudinal incision made in its convex surface; the long sutures connected with the ileum were then passed through the serous and muscular coats of the colon, the anterior threads about half an inch apart at one end of the opening in the colon, and the posterior threads at a similar distance at the other end. (Fig. 1.) The open end of the ileum was then thrust through the slit and the sutures firmly tied, thus preventing the possibility of the bowel slipping out; two Czerny-Lembert sutures, one on each side, were introduced, passing through the serous and muscular coats of the colon and small intestine, and tied firmly. An omental flap was finally fastened round. The parts were thoroughly cleansed and dropped back into the abdomen, and the parietal wound closed and dressed in the usual way. The operation lasted about one hour.

The patient stood the operation very well, and was returned to bed, and ordered to be fed with nutritive enemata and zyminised meat suppositories for the first twenty-four hours.

August 4th.—Motion passed naturally by the rectum to-day, and continued to do so daily. No tenderness over the abdomen, excepting over the original tumour, the outer and lower side of which is brawny, and had all the appearance of deeply seated cellulitis.—5th: I visited the patient with Dr. Hayes, and found the bowels had acted naturally and well and the wound looking healthy. A large abscess was pointing at the upper part of the thigh; this was freely opened, letting out a large quantity of stinking pus; this was kept syringed out and drained. The patient takes his nourishment well, and is kept up with brandy, champagne, beef-tea, &c. The patient had not sufficient vital

FIG. 1.



power left to resist the constant drain of the abscess, and died on August 16th, thirteen days after the operation.

Remarks.—Had this patient been operated on earlier I am convinced that his life might have been materially prolonged. So far as the operation was concerned, it was all that could have been desired. There was no peritonitis and fæces passed freely from the day of the operation until his death, nearly a fortnight after. This being the case, this operation must commend itself to all surgeons as being far preferable to any operation which has for its aim merely the formation of an artificial anus or a fæcal fistula. In my experimental research, published in July, 1889, I had not one death after the operation I have described, and the result, as may be seen in Fig. 2 (a specimen of which is now in the Museum of the College of Surgeons), is perfect, and I have but little doubt at no far distant date, in cases of obstruction of the bowels, from whatever cause, the continuity of the intestinal canal will be preserved either by a similar operation to the one described, or by means of approximation plates, as suggested and practised by Professor Senn, and that the only cases in which a fæcal fistula will be justifiable will be in cases in which the patients are too exhausted to allow of their taking an anæsthetic for a lengthened period.

FIG. 2.

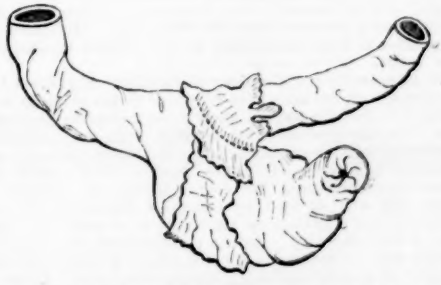


Fig. 1 is only intended to show how the ileum is implanted into the colon, but in practice it is always desirable to divide the colon and invert and fasten up the divided ends, so as to prevent the possibility of fæces returning over the diseased surface. In the above case this was not done, as the patient was in a very low condition, and it was recognised that the operation was only a palliative one.

Upper Wimpole-street, W.

SOME NEW MILK STERILISERS FOR DOMESTIC USE.

BY HENRY ASHBY, M.D., F.R.C.P.,
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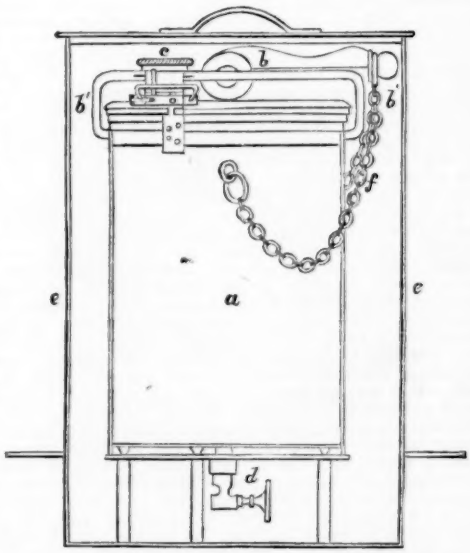
AT the present time we are only beginning to realise that one of the most important differences between human and cow's milk is that the former is free from living organisms, while the latter, by the time it is delivered to our houses, contains many microbes, and this is especially true of the cheaper classes of town milk. In such milks we have only to examine the sediment in the large milk-cans in order to detect matter foreign to the milk; thus we may find hay seeds, fragments of straw, fæcal matter, sand, dirt, epithelial scales, human and cow's hairs. And, if we further inspect the milking process and see the condition of the cows and cowsheds, we shall cease to wonder at the contamination present; especially if we bear in mind that in the winter months the cows are milked before daybreak and after sunset, so that the process goes on in the dark, or at best by a dingy light. In addition to these tangible impurities, bacteria in number from 20–100,000 per cubic centimetre may be found in milk (Escherich). The presence of bacteria in milk is evidence that decomposition changes are in progress which sooner or later, according to the temperature to which it is exposed, lead to its turning perceptibly sour to the taste, and curdling. It need hardly be said that the worse class of milk for an infant is that which "is on the turn," for not only is the curd rapidly thrown down in the infant's stomach, but the bacteria present are not destroyed, and, especially when the digestive juices are weak, continue to effect the decomposition changes which they have begun outside the body. The best cow's milk for an infant is that which is fresh and absolutely free from microbes. Of other dangers to the infant and others from taking uncooked milk there is evidence to show that milk may be the means of conveying the infective bacillus of tubercle, diphtheria, scarlet fever, zymotic diarrhœa, &c., from the farm to the household of the consumer of milk. In order to avoid these dangers, the advice to boil the milk has often been given. But boiling the milk over a fire has the disadvantage of running the risk of "burning" it; moreover, the taste is materially altered, and if the milk is only just brought to the boiling point, it is doubtful if all the bacteria which may be present are destroyed. To effectually "sterilise" milk Professor Soxhlet some three years ago devised his now well-known apparatus, but which in this country at least has not found its way into any great number of households. It is undoubtedly efficient, but it is somewhat complicated and expensive to work on account of the frequent breakages of the bottle.

More recently modifications of Soxhlet's apparatus have been made on the same principle, and if his original apparatus falls into disuse, we shall nevertheless be grateful to the Munich professor for having given an impetus to domestic milk-sterilisation. Of the more recently constructed apparatus which are now to be obtained none seem better adapted for either family or hospital use than the one devised by Professor Escherich of Graz. It consists of a cylindrical tin vessel, *a*, of some three pints and a half capacity. It has a removable lid at the top, which can be fastened on, hermetically sealing the tin by means of a lever and catch arrangement, *b b'*. When the lever *b* is raised the lid can be removed; when forced down, as in the engraving, the lid is secured. Fixed in the lid is a wool filter arrangement, *c*; the passage through the filter can be opened or shut by means of a stopcock worked by a stirrup or loop of wire. At the bottom of the tin is a stopcock for drawing off the milk. The tin fits into an outer vessel, *e*, which contains water and is placed on the kitchen range. To use the apparatus the infant's daily ration is prepared, or two days' rations may be taken. In the latter case two pints of fresh milk and one pint of barley-water and sugar are placed in the inner tin and the lid applied, the stopcocks both at the bottom and in the lid being turned off. The milk tin is placed in the outer vessel containing water, the outer lid closed and placed on the kitchen range, and the water is kept boiling for half an hour. The temperature of the milk is in this way maintained at 210° F., a temperature not high enough to risk an explosion, but sufficient to destroy the microbes in the milk, at least as far as all practical purposes are concerned. No marked change takes place in the taste of the milk. The apparatus is allowed to cool, the inner tin is hung up to the wall of the pantry or other cool place by means of the

FIG. 1.

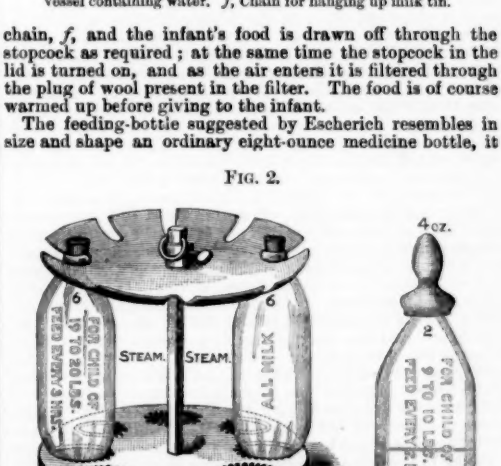


Escherich's milk steriliser. *a*, Tin containing milk. *b*, Lever; *b'b'*, catch for securing lid. *c*, Wool filter. *e*, Outer tin vessel containing water. *f*, Chain for hanging up milk tin.

chain, *f*, and the infant's food is drawn off through the stopcock as required; at the same time the stopcock in the lid is turned on, and as the air enters it is filtered through the plug of wool present in the filter. The food is of course warmed up before giving to the infant.

The feeding-bottle suggested by Escherich resembles in size and shape an ordinary eight-ounce medicine bottle, it

FIG. 2.



Seibert's milk steriliser, consisting of tin tray and series of feeding bottles of different sizes, according to weight of infant.

is graduated, and instructions concerning the amount and strength of the food to be prepared, and the amount to be given in each bottle, are engraved on the side. The maker is Theodor Timpe, of Magdeburg, North Germany. The price in Germany is 12*s.* 6*d.* It can be obtained in this country from A. Hailwood, St. Mary's-gate, Manchester.

Another simple form of milk steriliser is one devised by

Dr. A. Seibert of New York. It consists of a tray (see Fig. 2) and eight feeding bottles, with special rubber stoppers and a nipple to fit on to the bottle when the infant is fed. There are six series of bottles, the smallest size being 3 oz. capacity, and the largest 8 oz., arranged for infants according to their weights. The bottles are filled up to a given mark with milk, and then up to the neck with barley-water or water, and sugar added. They are then fitted into the tray, and steamed for half an hour in a saucepan provided with a lid. During the steaming process, the rubber stopper is fitted loosely into the bottles, so that the steam escapes by two slots or grooves in the side of the stopper; when the steaming is complete, the stoppers are pressed into the bottles, so as to seal them up. When the infant is fed, a bottle is warmed up and the stopper withdrawn, and the nipple placed on the bottle.

Modifications of Soxhlet's original apparatus have been suggested by Prof. C. Flugge and several others. The most important change in Flugge's is that instead of rubber stoppers with small glass rods fitting into the stopper the feeding-bottle is provided with a loosely fitting glass cap, which he has proved experimentally to answer the purpose of preventing the microbes in the atmosphere entering the bottles. I have not had an opportunity of examining Flugge's apparatus, and I do not know if it is to be had. The systematic use of some efficient form of milk steriliser in the household, especially where infants are being artificially fed, is, I believe, of the greatest importance; their use will, I feel sure, tend to the diminished use of many of the patent foods now so commonly employed, and lessen infant sickness and infant mortality.

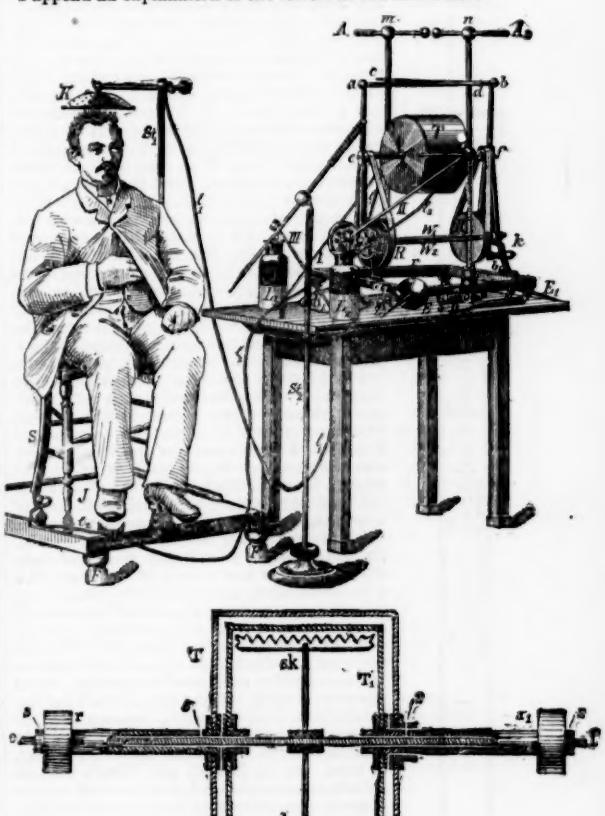
Manchester.

FRANKLINISM IN DAMP CLIMATES.

By JOHN FLETCHER LITTLE, M.B., M.R.C.P.,
PHYSICIAN TO THE ST. MARYLEBONE GENERAL DISPENSARY.

THE use of statical electricity in this and other countries where the atmosphere is often laden with moisture has been greatly hindered by the want of machines which are unaffected by hygroscopic conditions. No therapeutic agent which cannot at all times be turned to account is ever likely to come into common use. During certain seasons of the year, but especially during the spring months, frictional machines are uncertain in their action, and often fail altogether. This occurs even in the dry atmosphere of Paris, where every precaution has been taken, and much more so in our damp climate. Convinced of the value of this form of electricity, after having watched its application in Charcot's clinique at La Salpêtrière, I have long wished for an instrument which should always be available. There is now such a machine made by Gläser of Vienna. Its constancy also appears to be perfectly reliable. The electricity is generated by the rotation of two vulcanite drums revolving one within the other. The outer drum being air-tight, damp cannot affect the production of the electricity. Within the inner drum are two combs, and their position is indicated by a slit crossing the right end of the central bar, to which they are attached. The ends of the slit point in the direction of the combs. In order to excite the machine, a strip of vulcanite of the size of a paper knife is rubbed with a piece of new flannel, and held across the outer drum in a line parallel to one of the inner combs. Half a turn of the handle is sufficient to prepare the machine for use. During the first week in April, 1890, I commenced experimenting. The weather was so damp and wet that all my friends using other statical machines informed me that they found the greatest difficulty in getting their instruments to work, and sometimes failed altogether to excite them. The tests I applied were of the severest kind I could devise. The machine was placed in a room without a fire, and the windows left open night and day. The machine was never dusted, wiped, or protected in any way, and yet I was always able to evoke sparks two and three inches in length whenever I wished. Another advantage that I found it possessed was that there was no change of polarity. When I placed the strip of vulcanite over the upper internal comb and turned the handle to the right, the outer comb marked *Sk* in the illustration, became positively electrified, and remained so as long as the handle was kept in motion. The two electricities are collected respectively at the two external combs which are connected with the discharger. The positive comb is recognised by a hissing noise as of steam escaping in small jets, and by a bluish-purple phosphorescent brush extending in a sheet from the comb over the drum for several inches. This is best seen when the room is darkened. The negative comb is distinguished by a row of small, well-defined, luminous spots, and by a slight crepitant sound. The positive knob of the discharger is known by the purple colour of the phosphorescence when sparks are drawn by approaching the two knobs within an inch of each other. At the same time the negative knob is indicated by the brightness of its end of the spark. No attempt should be made to reverse the polarity of the combs by turning the handle in the opposite direction. When this is done, it often happens that the two ends of each external comb become charged with opposite electricities. This also occurs if the discharging rods are slowly separated until the sparks cease to be emitted.

I append an explanation of the letters in the illustration.



T_1, Outer drum. *Sk*, Sk_1, Outer combs. *r r*, Small wheels for leather straps. *R* R_1, Large wheels. *e f*, Ends of axis. *a b*, a_1 b_1, Iron frame and stands. *k*, Handle. A_1, A_2, Eborite handles of discharger. *m n*, Knobs through which the handles glide.

Welbeck-street, W.

COLLIERY EXPLOSIONS.—It is announced that, on Mr. Secretary Matthews' recommendation, the Queen has approved the appointment of a Royal Commission to inquire into the effect of coal dust in originating or extending explosions in coal mines. The chairman will be the Right Hon. J. Chamberlain, M.P. The other Commissioners will be Lord Rayleigh, F.R.S., Professor H. B. Dixon, F.R.S., Sir W. Lewis, Mr. Emerson Bainbridge, and Mr. C. Fenwick, M.P.

A RAPID METHOD FOR THE ESTIMATION OF UREA IN URINE.

BY C. J. H. WARDEN,
PROFESSOR OF CHEMISTRY, MEDICAL COLLEGE, CALCUTTA.

As Sutton has remarked, the sodic hypobromite method of estimating urea in urine has given rise to endless forms of apparatus, the principle of construction being similar in all, with the exception, I believe, of Lunge's nitrometer, when it is used for the estimation of urea. In all the instruments hitherto proposed the decomposition of the urea, and by the hypobromite, has been accomplished in one apparatus, and the evolved gas measured in a separate tube. In the method now described the evolved nitrogen is measured in the same tube used for the decomposition of the urea, and the procedure is consequently much simplified. The apparatus used for the decomposition of the urea and measurement of the liberated nitrogen consists of a slightly modified form of Crum's well-known nitrometer. Crum's tube, as usually constructed, has a total length of 210 mm., an internal diameter of 15 mm., and a capacity of about 25 cc., the cup at the top having a capacity of a little over 2·5 cc. The modifications desirable in adapting the tube for the estimation of urea may be thus summarised:—(*a*) Trebling the length of the tube, and thus making it 630 mm. long, the capacity being increased to 75 cc., while the internal diameter is not altered; (*b*) grinding on to the lower open end of the tube a glass stopper on which two narrow grooves have been filed; (*c*) increasing the capacity of the small cup at the top of the tube to 5 cc., and having it accurately graduated to hold 2·5 cc. when filled to a certain mark; (*d*) using somewhat thinner glass than that employed in the construction of Crum's tubes, as no mercury is used in the process.

The tube is graduated on the principle of Russell and West's receiver apparatus, which was constructed to be used with 5 cc. of urine. It was found that 5 cc. of a 2 per cent. solution of pure urea evolved 37·1 cc. of nitrogen, and this volume was taken as the basis of graduation of the measuring tube. In the process now being described only 2·5 cc. of urine are used, and as 2·5 cc. of a 2 per cent. urea solution evolve 18·55 cc. of nitrogen, this volume of gas will necessarily be equivalent to 2 per cent. of urea. One per cent. of urea is therefore equal to 9·27 cc. of nitrogen, and the 9·27 cc. volume is divided into ten equal parts, each part being equal to 0·1 per cent. of urea. These divisions are further subdivided into two each, representing ·05 per cent. of urea. The graduations should be continued so as to indicate up to 3 per cent. of urea. As in Russell and West's tube all calculations are avoided, the observed volume of gas at once indicating the percentage of urea in the specimen of urine under examination.

In using the apparatus the following solutions are required:—1. A cold, aqueous, saturated solution of common salt. 2. Hypobromite solution, made by dissolving 100 grains of caustic soda in 750 cc. of distilled water, and adding 25 cc. of bromine; this solution should be freshly prepared in small quantities as required for use. To use the apparatus, the stopcock should be first slightly greased and closed, the tube inverted, and the grooved stopper removed. The hypobromite solution is then poured into the tube to overflowing, the stopcock opened to allow a drop or two to escape, and thus displace the small column of air in the base of the stopcock. The grooved stopper is then pressed home, the excess of hypobromite solution escaping by the grooves in the side of the stopper, in the same manner as the superfluous fluid escapes through the capillary orifice in the stopper of a specific gravity bottle. In this way the tube is filled with the hypobromite solution, all air being excluded. The tube is now inverted, held under a tap of water, and the cup &c. thoroughly washed, and then most carefully dried. The tube is now stood in a small trough of brine—a finger bowl answers very well,—and supported by a filter ring or clip. The sample of urine to be examined is then poured into the dry cup up to the 2·5 cc. graduation, any excess of urine accidentally introduced being removed by a fine fold of blotting-paper. The cup is then filled up with brine, which is well mixed with the urine by a small and slender glass rod. The object of diluting the urine with brine is to increase its density. If ordinary urine were introduced into the tube it would float upon the surface of the hypobromite, and only a slight reaction would immediately occur at the point of junction of the two fluids; but by increasing the specific gravity of the urine in the way indicated it flows through the hypobromite solution, and brisk effervescence ensues. If the urine solution were allowed to enter the tube while closed with the grooved stopper, a portion of the evolved gas would escape through the bore in the stopcock. In order therefore to avoid losing gas from this cause, the grooved stopper is first removed before urine is allowed to escape from the cup into the tube. In allowing the urine to enter the tube the stopcock should be opened sharply, and a small amount of urine in a full stream allowed to enter; decomposition of the urea at once ensues, and the gas collects at the top of the tube. When effervescence has ceased, more urine is introduced, and so on until the cup has been emptied. The cup is then filled with 2·5 cc. of dilute brine, and rinsed round by means of the glass rod. The whole of the brine is then allowed to enter the tube at one operation. The same amount of dilute brine is then again placed in the cup, rinsed round, and allowed to enter the tube. The tube is now grasped by the right hand, the thumb being tightly pressed against the open end and the contents thoroughly agitated. Lastly, the tube is placed in a vessel of water and the thumb removed, when the saline solution flows out and water occupies its place. If while the open end of the tube is below the surface of water, water from a tap be allowed to flow down the outside of the tube, the temperature of the gas will be rapidly reduced to that of the water. The remaining operation consists in marking the volume of gas with the usual precautions, the volume indicating the percentage of urea in the urine without the trouble of any calculation; corrections for temperature and pressure can, of course, be applied if necessary. In using the tube, if the evolved gas should exceed the volume yielded by 3 per cent. of urea, the urine must be diluted with an equal volume of water and 2·5 cc. of the diluted urine used in the manner already described, the percentage of urea as indicated by the volume of gas being doubled. The points to which special attention may be drawn in connexion with this method of estimating urea are: (1) extreme simplicity of apparatus, all the various operations of measuring the urine, decomposing the urea, and measuring the volume of evolved gas being performed with one instrument; (2) ease and rapidity of manipulation; (3) results as accurate as those afforded by any of the various modifications of Russell and West's original method.

Messrs. Cetti and Sons, of Brooke-street, Holborn, are prepared to supply these modified Crum tubes, and the well-known name of the firm is a sufficient guarantee that the graduations will be accurate.

ON SOME FORMS OF ABDOMINAL ABSCESS.

BY G. A. WRIGHT, B.A. OXON., F.R.C.S.,
SENIOR ASSISTANT SURGEON, ROYAL INFIRMARY, MANCHESTER, &c.

(*Concluded from p. 302.*)

CASE 12. *Appendicular peritonitis cured by incision.*—On April 2nd, 1888, while down in the country, I saw a girl aged thirteen, a patient of Mr. Mercer, of Stanford, Essex, who fourteen days before had without known cause been seized with pain in the right iliac region. The pain and vomiting had continued ever since. There was great local tenderness; the pain intermitted; the bowels were usually constipated, but not constantly so; there was no great fever, the cheeks were flushed, and the abdomen becoming

tympanitic. When I saw her I found a healthy-looking girl, with a flushed face. She complained of great tenderness in the right iliac fossa extending down to the knee on the same side. She could not extend or invert the leg; there were also pain and great tenderness in the loin. The skin was not very hot; the pulse was quick; the tongue coated slightly and somewhat dry. There was much tension and resistance in the right iliac fossa; not much tympanites. The diagnosis was appendicular peritonitis. I made an incision one inch and a half long, just internal to the anterior superior spine, and let out half a pint of fetid pus. I put in a tube and gave a good prognosis. She got well without any bad symptom, and remains so (1890).

CASE 13. *Typical fatal case of appendicular peritonitis.*—Willie S——, aged nine, a patient of Dr. Cox of Eccles, was a fairly healthy boy up till April 22nd, 1890, when he amused himself by eating a number of dried peas. He had never had any previous bowel trouble. Two days later he awoke with pain in the abdomen, which continued; the pain was chiefly in the right iliac region, and was accompanied by vomiting, a quick pulse, and a temperature of 100° to 101° F. The vomiting was not fæcal, there was no intestinal obstruction and no diarrhœa. There was some vesical irritation, causing frequent micturition. I saw him first on April 28th, 1890. He was then lying in bed with a thin, somewhat pinched face; the right leg drawn up; breathing almost entirely thoracic; abdomen moderately distended and tender, especially in the right iliac region. No distinct swelling in the iliac area was to be made out by palpation, but some dulness and increased resistance. There was slight tenesmus, but no blood was passed by the bowel, and there was no protrusion of any intussusception in the rectum, which was empty. Rectal examination revealed some fulness in the right iliac fossa. The sickness still continued, but was not fæcal. Our diagnosis was appendicular peritonitis, and extension to the general peritoneal cavity. Operation was advised. Two hours later I opened the abdomen over the cæcal area, and let out several drachms of thin pus. The cavity seemed to be shut off, but only by feeble adhesions. No attempt was made to find the appendix; a tube was inserted and the wound dressed. There was considerable collapse, which had begun before the operation. The next morning he had rallied a good deal; the abdomen was still distended, but somewhat less so; there was free discharge of foul sero-pus from the tube, and the edges of the wound were blackened; there was still tenderness in both loins; there had been much sickness and no sleep, and nutrient enemata had been given. After this he failed to get any sleep, became delirious, and sank exhausted before the next morning.—*Necropsy:* Dr. Wild, who kindly made a post-mortem examination for us, reports as follows: Abdomen much distended and dark-green in colour (thirty-seven hours after death). On opening the abdomen the entire peritoneum, from diaphragm to pelvis, was covered with layers of thick, yellow lymph, having a fæcal odour, but not stained by fæces. The intestinal coils were matted together and to neighbouring organs. The lymph was firmer and more abundant towards the cæcum, but no distinct cavity could be made out. The vermiform appendix closely adhered to the outer and posterior wall of the cæcum, was much bent on itself, and the terminal three-quarters of an inch formed a soft grey slough, while a perforation, involving about three-fifths of its circumference, was closed by yellow lymph. The proximal portion contained a hard fæcal mass the size and shape of a small bean, with a central brown fibrous body. There was no other intestinal lesion. This case illustrates the type of appendicular abscess in which, for some reason, no efficient barrier of adhesions forms around the irritating material.

CASE 14. *Fatal case of appendicular peritonitis, without operation.*—On April 15th, 1888, Dr. Bailey of Stockport asked me to see Mr. C——, aged twenty-eight. He had a phthisical family history, but his health had been fairly good till four or five weeks before, when he had an attack of generalised abdominal pain. Nothing local was found; there was no sickness or constipation. He got quite well, and went back to his work as an engineer. On April 11th he was seized suddenly during the night with epigastric pain. This lasted for twenty-four hours, and then became more generalised. There was no vomiting, and not much distension. The bowels acted on the 11th. He had no hernia, no history of any injury, and there was no known cause for the trouble, but he had had pain after food for some days previously. There was no hæmatemesis, and he was not a drinker. On the 14th he got worse, with apparently fæcal vomiting and collapse. A long tube had been passed into the bowel without result. The temperature ranged from normal to 102°; pulse 100, failing latterly. He had taken opium and bismuth. I saw him on April 15th, at 5 P.M. He was a thin man, and lay tossing restlessly in bed; the face livid and congested, hands and feet cold and clammy; pulse not very feeble. There had been no vomiting since the morning, and he had passed plenty of flatus and urine. The abdomen was uniformly distended. There were no visible coils. There was resonance everywhere, including the flanks. There was no tenderness on pressure except in the right iliac area and the right loin, where the pain on pressure was extreme. The skin was not œdematous. Per rectum there was tenderness and perhaps fulness in the right iliac area. The tongue was furred but moist; face pinched and haggard. The abdomen moved freely on respiration. We came to the conclusion that there had been an attack of appendicular peritonitis four weeks before, with recovery. That there was a second attack of five days' duration, and that there was now general peritonitis by extension and, probably during the last twenty-four hours, leakage of foul pus. An almost desperate prognosis was given, but the friends were told that operation gave one, though a poor, chance. They decided to think it over. The patient died in the night.

Several of the preceding cases are, of course, open to more than one interpretation. Thus, of those that I have classed as probably glandular, it is possible that some may have been connected with the cæcum, and even of those on the left side, it may be said that they were due to a lesion of a displaced cæcum, such displacement being by no means a rare occurrence, as shown by Mr. Treves. On the other hand, it is, I think, not improbable that some of the cases usually classed as typhlitic are really glandular, and this is probably true in the less severe instances.

CASE 15. *Localised peritoneal abscess, with abscess in intestinal wall.*—Harry P——, aged seventeen, was sent to me at the Royal Infirmary by Dr. Massiah on Jan. 19th, 1889. He was a healthy boy until a week ago, when he was seized with severe pain shooting across the abdomen; this soon became localised in the right iliac fossa. We afterwards obtained a history of his having been kicked in the abdomen by a man. There was constipation, which apparently had lasted the whole week between the onset and his admission. On his arrival at the infirmary the lad was evidently seriously ill, and complained of pain across the abdomen. On examination, a large, brawny swelling was felt in the right iliac fossa; the part was very tender and he was feverish (temperature 101°). I operated shortly after his admission, making an incision three inches in length a little above and internal to the anterior superior iliac spine. The peritoneum was found thickened, and on opening it and inserting a director a gush of sero-purulent fluid escaped. A part of apparently the small intestine, at any rate not the appendix, was seen presenting at the wound, and on it was a small, round, yellowish patch—an abscess in the intestinal wall. On puncturing this patch, a drop or two of pus escaped, and afterwards a little feculent material. The wound was drained freely; the bowel was as little disturbed as possible, no attempt being made to discover any further collection of pus, or to make out the relations of the parts, and the wound was dressed. The next dressing was three days later. He got steadily well; there was no further escape of fæces; and he was discharged on Feb. 13th, and, I believe, has remained perfectly well since. This was an interesting and unusual case. Whether the abscess in the intestinal wall was primary or secondary must remain doubtful.

CASE 16. *Local peritoneal abscess of obscure origin.*—On April 3rd, 1884, I was called by Mr. Power to see Miss A——, aged ten. On March 27th she had been seized with pain in the abdomen, followed the next day by vomiting, and on the 29th by purging. Since the 29th there had been vomiting and absolute constipation. No blood had been passed, except a little after administration of an enema; there was no tenesmus. She passed a fair quantity of urine. On inquiry, there was a previous history of occasional attacks of pain in the left side of the umbilicus. No immediate cause for the trouble, such as improper food, was known. There was no evidence of tuberculosis. I found the child emaciated, but with a fairly good pulse. The abdomen was moderately distended, not tender, and

there was not much pain. Examination of the rectum revealed nothing except perhaps some fulness in Douglas's pouch; nothing local could be made out in the abdomen. The pain was a little to the left of the umbilicus. Belladonna was ordered internally. On the 4th I heard that she had had no vomiting till 10 A.M., but the abdominal distension had increased, as had also the fulness in Douglas's pouch. There was increased dulness in the left flank, shifting very slightly on change of posture. The obstruction was still complete. I then opened the abdomen below the umbilicus, and, passing in a finger, broke down some adhesions at the back of the abdomen and set free some pus. Some of the coils of intestine were collapsed, others distended. The pus was offensive. The child died the same night. No post-mortem examination was obtained.

CASE 17. *Tubercular peritoneal abscess.*—A little girl one year old, a patient of Dr. Massiah, came of a healthy stock, and had been well till about Jan. 10th, 1887. It was then dyspeptic, and was seen by Dr. Ashby, who thought it probably had enlarged mesenteric glands. It improved under treatment for a time. On March 8th, 1887, it began to vomit, and the bowels were constipated; all food was at once thrown up. Dr. Massiah examined the abdomen and found it full and tense, with some dulness in the hypogastrium. Nothing was felt per rectum, but while he was examining it some offensive fluid escaped, apparently from the vulva; it smelt of sulphuretted hydrogen, as did the vomit. The child was rapidly failing, and had a temperature of 100° to 101°. At 8 P.M. on the 10th I saw it with Dr. Massiah. The face was thin and pinched, with dark hollows under the eyes; the abdomen was very full and tense; there was some dulness in the hypogastrium, and greater resistance and pain in the left iliac fossa, and to the right of and above the umbilicus. On rectal examination, no sign of intussusception was found, but a mass which was thought to be matted coils of bowel was felt in the left iliac fossa. There was no tenesmus, but an enema returned at once; no blood or mucus escaped per rectum; there was no defined tumour to be felt in the abdomen. A diagnosis of localised peritoneal abscess and general matting of intestines was made, and a bad prognosis given. Abdominal section was advised as giving the only chance. The abdomen was opened below the umbilicus; the peritoneum was found to be thick and red, and the organs so matted together that no cavity could be found at first. After gently separating adhesions a gush of thin, flaky, fetid pus escaped, in quantity about half a pint; the swelling of the abdomen subsided. On passing a finger into the abdomen the intestines were found all matted together. A large cavity reaching from the left iliac fossa upwards to the right beyond the umbilicus was washed out and drained. The vomiting stopped at once. On the 11th some fæcal matter came away, and it was evident that the bowel had given way into the cavity, which was again washed out. 12th: Temperature 105°. Everything taken by the mouth comes away almost at once through the wound. Child sinking rapidly. The temperature rose to 106°, in spite of antipyrin, and the child died early in the morning of the 13th. Necropsy: General matting of the intestines was found, except that the colon was nearly free. There was general tubercular peritonitis. The abscess cavity was well drained, and it was evident that the lesions were of two different dates, there being old adhesions and recent abscess formation. The opening in the bowel was apparently high in the small intestine, but its exact site could not be made out. There were a few tubercles in the right lung. The bladder had no communication with the bowel, so the source of the fluid, which was thought to have escaped during the first rectal examination, was not made out. Localised tubercular peritoneal abscesses may probably arise in any one of three ways: (*a*) as a result of extension from a tuberculous mesenteric gland; (*b*) as a result of perforation of a tubercular ulcer; or (*c*) as a primary local peritoneal inflammation.

CASE 18. *Fibro-neuroma of a lumbar nerve simulating appendicular peritonitis.*—Dr. G——, aged forty, came to see me on Feb. 26th, 1889, and gave the following history. For two years he had suffered pain, or rather discomfort, in the right iliac region. The pain came on in attacks at intervals of about a month. His bowels were rather loose during this time, but this was not unusual. Twelve months ago the pain became more severe and the attacks more frequent, sometimes occurring almost daily. At this time the bowels were open twice daily, and there was no vomiting. In another six months the pain increased in severity and frequency, each attack lasting a few minutes. When Dr. G—— came to see me the pain was violent, and appeared daily; the bowels were moved once in two days, and the motions were either small scybala or loose; blood was occasionally passed in small quantity, but no pus. The largest motion was not larger than a little finger. Urine normal. Dr. G——'s family and personal history were both gouty. On examination I found the abdomen moderately full, but not distended; there were no visible coils, no resistance, no tenderness, except in the right iliac region, where a little above and internal to the anterior superior spine was a well-defined, very tender nodule the size of a small filbert and fairly freely movable. There was gurgling in the cæcal area. Liver dulness quite clear of area of pain; no history of gallstone or jaundice. Sir William Roberts, who had sent him to me, had advised him to take olive oil, and this he had done. Any exertion greatly aggravated his trouble, and he was quite incapacitated from taking charge of his practice. I expressed the opinion that his trouble probably depended upon the presence of a concretion in the vermiform appendix, and advised him to take extract of belladonna internally and lie in bed for a week. If after that time there was no improvement, I recommended an exploratory operation.

After some delay, for reasons unconnected with his health, as no relief was obtained operation was decided upon. On May 2nd, 1889, I opened the abdomen a little below and internal to the spot where the mass was felt, and found that it was not appendix, but a fibro-neuroma lying in the subperitoneal tissue. The appendix was drawn up and inspected and found quite healthy. The tumour was removed and the abdomen closed. For some days he did not do very well, and had a little pneumonia, but this passed off, and he was very well when, on the tenth day after operation, he sat up and strained violently; the wound gave way, and a mass of omentum protruded. However, no serious symptoms followed, and a week later I removed the protruding mass. He then recovered without further bad symptom, and remains quite well and free from any sign of his former trouble. I have added this case to the others as bearing upon the diagnosis of appendicular mischief, which was certainly closely simulated in many points.

The cases here recorded consist of a selection of those that have been under my care in the last ten years, and might have been extended; but they sufficiently illustrate the types of case. Cases 2, 3, 4, 5, 6, and 9 were published some years ago in the *Archives of Pædiatrics*, in a paper I sent to that journal, on Some Forms of Abdominal Abscess occurring in Children.

Manchester.

THE CURE OF CHYLURIA, DEPENDING ON FILARIÆ IN THE BLOOD, BY THYMOL.

BY SURGEON-MAJOR E. LAWRIE,
RESIDENCY SURGEON, HYDERABAD.

IN an article on Chyluria by the late Surgeon-Major T. Lewis in "Quain's Dictionary of Medicine," this passage occurs:[1] "It cannot be distinctly stated that the course of the disease has been materially modified, much less cured, by any known remedy." It is, therefore, gratifying to be able to bring to the notice of the profession the following cases of chyluria which have been completely cured by the internal administration of thymol.

CASE 1.—Nazim Mahomed Beg, aged twenty, was admitted into the Residency Dispensary on Sept. 11th, 1889, on account of retention of urine. A catheter was passed and a small quantity of chylous urine withdrawn. The distension of the bladder was not relieved, and on Sept. 12th it was necessary to perform perineal section. A large quantity of white clot was removed, and a lithotomy tube was tied into the bladder, which was washed out with a solution of bichloride of mercury. At first quinine and various other remedies were employed without any effect; the urine continued chylous, the patient was never free from fever, and filariæ were always found in the blood at night. On Sept. 27th the administration of thymol in one-grain doses every four hours was commenced. On Oct. 12th the dose was increased to

[1] Vol. I., p. 253.

two grains. On the 18th the symptoms began to improve, and by Dec. 14th, 1889, he was quite well, and there was no trace of filariæ in the blood. When the patient was admitted into hospital, he was emaciated and almost in a dying state. He is now (Dec. 11th, 1890) quite well and is fat and strong. The improvement in his condition might be thought to be due to the spontaneous cessation of the disease, but no treatment did the patient any good whatever until the administration of thymol was commenced, and then the improvement was steady and gradual, and may fairly be attributed to the action of the drug.

CASE 2.—Mahboob Khan, sepoy, aged twenty. Admitted into the Afzul Gunj Hospital on Oct. 1st, 1890, on account of stone in the bladder. The patient stated that he had suffered from symptoms of stone for ten years. On admission he was emaciated, his temperature was 102°, and there was a large stone in the bladder. The stone was removed by lateral lithotomy at 1 P.M. on the day of admission, and weighed five ounces and nineteen grains. The temperature remained high after the operation, particularly at night, and on Oct. 6th the urine was discovered to be chylous. Filariæ were found in the blood, and also in the urine. The administration of thymol was commenced in two-grain doses on Oct. 6th, and increased to three-grain doses on the 11th. On the 14th the patient was attacked with dysentery, and the thymol was replaced by scruple doses of ipecacuanha. On the 20th he had recovered from the dysentery, and thymol was recommenced. The dose was gradually increased to five grains three times a day, and the patient left the hospital cured on Nov. 23rd. He is now (Dec. 15th, 1890) quite well, and is fat and strong like the first patient. His urine is normal, and there are no filariæ in the blood.

The important practical point in the above cases is the fact they establish that thymol has the power of destroying organisms in the blood and tissues, which are actually the cause of a well-known disease. The destruction of the organisms cures the disease. On the other hand, I have tried it extensively in many diseases which are supposed to be due to organisms, such as leprosy, phthisis, and gonorrhœa, but without benefit. Either, then, thymol, which is such a deadly poison to the filaria, is not a poison to the bacillus, which is extremely unlikely, or bacilli are not the cause of the diseases I have mentioned.

It appears probable that thymol may prove useful in the elucidation of some of the intricate questions involved in the relations of micro-organisms to disease, and it is on this account to be commended to the consideration of bacteriologists.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

REMOVAL OF THE UTERINE APPENDAGES FOR THE CURE OF OVARIAN INSANITY.

BY EDWARD COTTERELL, M.R.C.S., &C.

THE treatment of cases of mental disease dependent upon some ovarian disorder by the removal of the uterine appendages has not been, as far as I am aware of, brought before the profession very frequently. The following case may therefore interest some whose studies lead them to investigate mental disorders, especially those disorders dependent upon some form or another of ovarian disease.

Mrs. Y——, aged thirty-seven, married nine years; has five children, eldest eight years, youngest eight months. She has always been depressed at her menstrual periods. When about eighteen years of age her father died of apoplexy. For some years after this event she suffered from melancholia, which was always much worse during the catamenial periods; at the same time she was firmly convinced that she had caused the death of her father by poisoning him with opium. However, she got over this fancy and married, after a somewhat prolonged engagement. Her husband informed me that after her marriage she at times suffered from lowness of spirits, and that immediately after the birth of her last child she became quite insane for about two months, requiring an attendant constantly with her, as she more than once attempted to commit suicide when left to herself. When I saw her for the first time towards the end of 1886, her condition was similar to that described above, her symptoms becoming much aggravated at each menstrual period; for though the acuter signs passed away after the menstrual flow had ceased, there still remained a good deal of melancholia during the inter-menstrual period, which became aggravated with hallucinations as the succeeding catamenia approached. The patient had an anxious look, was very restless, and slept badly. Menstruation very scanty, and attended with a good deal of pain. She was imbued with the idea that she had poisoned her father and had caused the death of one of her young friends. She frequently heard voices which urged her to make away with herself. The usual routine treatment having been tried with little or no effect, I suggested the removal of the uterine appendages as a means of alleviating the distressing symptoms. This procedure having been agreed to, I accordingly performed the operation on March 15th, 1887. The patient recovered quickly from the operation, but the mental symptoms were no better—worse, in fact, as the suicidal tendency became more pronounced. By my advice she was removed to an asylum, where she remained for about four months. On her return, I found her sane in every respect. She had quite recovered from the suicidal mania, and the hallucinations were gone. Since that time she has not had any return of the old symptoms, and as nearly three years and a half have now elapsed since she had any, I hope that she is cured. The removal of the uterine appendages brought on at first, in this case, an acuter stage of the mental condition, but this is, I think, what one would be led to expect as most likely to occur in a patient suffering from ovarian insanity. The mental symptoms being dependent upon the ovarian irritation, any operative interference with these organs is likely to aggravate matters until the artificial menopause has been thoroughly established. This is how I translate the sequence of events in the above case, so that if I am correct in my diagnosis—viz., that the mental symptoms were due, and due entirely, to the ovarian irritation—there will be no return of the insanity. I may remark that the ovaries were rather smaller than normal, whilst the Fallopian tubes were swollen to about twice their usual size, and very injected.

Weymouth-street, W.

SUGGESTIONS ON THE ANTAGONISTIC ACTION OF COCAINE AND CHLORAL.

BY EDWARD F. WILLOUGHBY, M.D. LOND.

SOME years ago, when suffering frequently from attacks of acute coryza, which while they lasted rendered me almost unable to write from the incessant sneezing and running from the nose, I found the greatest relief from nasal injections of a 2 per cent. solution of cocaine, from five to ten drops to each nostril at intervals of twenty minutes or half an hour. I could thus cut short an impending attack, or by using them even more frequently arrest—in fact, cure—one that had set in for some hours with the utmost intensity. But on several of these occasions I noticed that the use of the cocaine during the evening was followed by absolute sleeplessness, four consecutive doses of ten grains each of chloral inducing not more than two or three hours' light sleep, though ordinarily, when wakeful from mental overwork, five grains would have given a natural, and ten a sound and long night's sleep. Indeed I believe that I have, after the free use of cocaine, taken even more than the forty grains of chloral with but very moderate effects. Under these circumstances no sense of fatigue followed the sleeplessness, and no headache or drowsiness the sleep when obtained by these excessive doses of chloral. A lady for whom I prescribed cocaine pastilles for a painful neurotic condition of the glottis having sucked several in the course of the evening and gone to bed with two more in her mouth (each $\frac{1}{12}$ gr.), told me that she had been "wide awake" all night, without feeling tired next day; and in other cases I have observed the like wakefulness after the use of cocaine. But the evident antagonism in my own case between cocaine and chloral suggested to me the probability of its being found useful as an antidote in chloral poisoning. I applied for and obtained a licence for undertaking a course of experiments on the subject; but finding that I could not be absent from home for so many hours as the performance of these would require, I allowed

the licence to lapse. The treatment of chloral poisoning hitherto has been eminently unsatisfactory. Chloral is a direct antidote to strychnine, antagonising the excessive muscular irritation of the latter; but the converse does not hold good, since the action of chloral on the sensorium or the mental functions has not its physiological counterpart in that of strychnine; strychnine, in fact, antagonises only the lesser half of the effects of chloral. I know that some extreme cases have been successfully treated by strychnine, galvanism, and artificial respiration, but the profound sleep has had to work itself off. Cocaine, which, if it were found expedient, in very severe cases might be supplemented by strychnine, would appear to me to be the antidote required, and, should an opportunity present itself, I shall not hesitate to try it subcutaneously, at least in the first doses.

I would invite anyone who may meet a case of chloral poisoning to do the same, and I shall feel greatly obliged if anyone having leisure would take up my licence and institute a course of experiments *in corpore vili* on the lethal doses of chloral and the efficacy of cocaine at various stages of the poisoning by chloral from the earliest to imminent death, with the single condition that he communicate with me, and give me the credit of priority of suggestion by associating my name with his.

Finsbury-park, N.

NOTES ON A CASE OF PUERPERAL ECLAMPSIA; TREATMENT; RECOVERY.

BY W. E. REDMAN, M.R.C.S. ENG.,
ADMIRALTY SURGEON AND AGENT AT BRIDLINGTON QUAY, ETC.

ON the evening of Christmas Day last I received an urgent message to attend a Mrs. S—— at once, as she was thought by the monthly nurse in attendance to be dying. On arrival, I found the patient, a stout, florid primipara, in a semi-comatose condition, delirious, and not recognising those about her. Both the upper and lower extremities were much swollen and œdematous. She had voided but a small quantity of urine during the day, and this, on heating, coagulated into a semi-solid, muddy-looking, gelatinous mass. Digital examination revealed an almost fully dilated os and a roomy pelvis; membranes not ruptured; cranial presentation; uterine contractions strong and frequent. Recognising the gravity of the case, and almost expecting the onset of convulsions in consequence of the premonitory symptoms at any moment, I at once ruptured the membranes, and sent for some chloroform. The labour now proceeded apace, the head rapidly descending; but before I received the chloroform the patient had a severe convulsive attack, characterised by violent general muscular contractions, her features became distorted, the globes of the eyes turned upwards, the white sclerotics only visible, and the mouth convulsively fixed; the face became cyanosed, and frothy saliva tinged with blood appeared at the mouth. The attack lasted about four or five minutes. The patient now recovered semi-consciousness, and by this time the chloroform arrived. About six or eight attacks of varying degrees of intensity now succeeded one another at frequent intervals; during these I administered chloroform freely with most beneficial results, the intensity of the successive attacks being greatly controlled thereby. As the head was now making but slow progress through the pelvis, and its pressure apparently acting as an irritant to the mother, and being also well within reach, I resolved upon instrumental delivery. Having first administered chloroform freely, I applied the long forceps, and delivered the patient without difficulty and without any return of the convulsions. The cord was twice round the child's neck. The after-birth rapidly followed the child, which was much cyanosed, and it was fully an hour before respiration was established in it. After delivery the mother had two more severe convulsive seizures, each of which was modified in intensity by administration of chloroform as before. From this time all proceeded well, the patient gradually recovering consciousness, but having no recollection of what had occurred for some hours previous to or during labour.

Certain points are worthy of note in this case—the premonitory symptoms, a history of mental trouble and distress a few days before confinement, the value of instrumental delivery under chloroform in certain cases of puerperal eclampsia, the great value of chloroform to control and cut short the attacks, and the further fact that the albumen completely disappeared from the urine two or three days after delivery. Further than this, I need only add that both mother and child have made uninterrupted progress towards recovery.

Bridlington Quay.

THE CHLORAL TREATMENT OF PUERPERAL ECLAMPSIA.

BY M. H. FEENY, M.R.C.S., L.R.C.P. LOND., L.M.

AS the treatment of puerperal eclampsia is still an open question, opinions being divided between chloral, opium, or both combined, and anæstheticism, I send this case as an interesting contribution in favour of the former. And I take the occasion to express a long-formed conviction that it would be a wholesome practice, pregnant with much practical good towards the settling of such open questions, if all practitioners would publish their quota of evidence when such cases arise. Being happily of rare and unfamiliar occurrence, we naturally fly for aid to our most acknowledged text-books. From much observation in general practice, I find that the manifestations of disease are frequently at variance with the descriptions of books. Nor is this surprising, so much wider is the field of general practice than that of the specialist, no matter how numerous his hospital wards or how high his title. The most unerring of all guides are the symptoms of the disease and the constitutional forces of the patient. By treating the former under the guidance of the latter, a successful issue has often taught me that many a formidable and unpromising case can be thus brought to a happy termination.

L. C——, aged nineteen, seven months pregnant. Family history healthy. Father, mother, a brother, and sister living; no neurotic disease. Mother suffers from weak heart; no organic mischief. Patient commenced menstruating at fifteen; did so regularly for eight months, when she had her first fit. For the following three years the menstruation was irregular; general health fairly good. At eighteen she was treated for severe epileptic seizure, and made a good recovery. At the seventh month of pregnancy I was hastily called to see her at 11 A.M. I found her in a violent general epileptiform fit, grinding the teeth, which were firmly clenched. I ordered a mixture of bromide of potassium. The pulse was strong, healthy, varying irregularly with each paroxysm. Summoned again at 6.30 P.M. I was told the waters had broken and labour had commenced. The patient was in convulsions during the whole interval. On examination I found the os slightly dilated, membranes intact. She had passed a large quantity of hysterical urine. The case seemed desperate, and one for heroic treatment. Owing to the clenched teeth little of the mixture had been taken. On consultation, anæsthesia was suggested; but owing to the fixed condition of teeth and hard laboured breathing it was discarded. I quickly decided to make the pulse my helm and chloral my sheet-anchor. I mixed forty grains, forced the teeth open, and she swallowed it. At 10 P.M., convulsions still constant; os the size of a two-shilling piece, thick, and rigid. Ruptured membranes. I again gave forty grains of chloral; enema of one drachm of laudanum, which latter was immediately expelled. At 12 P.M. gave fifteen grains of chloral; fits ceased for half an hour. At 2 A.M. fifteen grains; had an hour's sleep. At 4 A.M. fifteen grains. Fits returned at 5 A.M., and labour was advancing. 6.30 A.M.: Child born during fit. 7 A.M: Fits ceased; placenta expressed; uterus contracted firmly. 11 A.M.: Sleeping quietly; had had three convulsions; was conscious during intervals. Ten grains of chloral to be taken every four hours. Had four seizures during twelve hours. Slept well during the night. Was quite conscious next morning, but knew nothing of what had happened. The child, as might have been expected, was stillborn. Ordered mixture of bromide and chloral. The patient made an uninterrupted recovery.

Lancaster-gate, W.

AN EASY METHOD OF FEEDING PER RECTUM.

BY Y. M. JONES-HUMPHREYS, L.S.A.

SOME months ago, having to treat a bad case of gastric ulcer by rectal feeding &c., I devised an apparatus consisting of a small funnel, a piece of elastic tubing ⅛ in. in diameter, 1½ ft. long, about 4 in. of glass tubing (by which the de-

scending fluid can be watched), and joined on to this an ordinary flexible catheter. The atmospheric pressure is sufficient to send any fluid into the rectum, and I have never noticed any return of the fluid, absorption being slow but efficient. The instrument is an improvement on the old enema apparatus in use. The claims for this method are—(1) It is extremely simple, the patient being able to pass the catheter into the bowel without experiencing any pain or unpleasantness; (2) it is cheap and easily made; (3) after once being shown, the most inexperienced person can use it, and thus we can be sure that our patient will have small quantities of nourishment at frequent intervals; (4) the fluid is slow in its passage, and thus nearly the whole quantity becomes slowly absorbed. In any case requiring rectal feeding I venture to hope that my professional brethren will find this simple method to be of use to them and a source of comfort to their patients.

Cemmaes, Montgomeryshire.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ST. BARTHOLOMEW'S HOSPITAL.

INTUSSUSCEPTION IN A CHILD NINE MONTHS OLD; ABDOMINAL SECTION; RECOVERY; REMARKS.

(Under the care of Mr. HOWARD MARSH.)

WE have alluded in past numbers of THE LANCET to the various methods of treatment of intussusception of the intestine, and we now give a short account of the successful management of another case by reduction after opening the peritoneum. It is a further addition to the increasing list of cures after abdominal section, a method which is becoming more frequently resorted to, and at an earlier period, after failure of other procedures. In the recent discussion at the Clinical Society,[1] the question as to the best method of treating the bowel should the intussusception be irreducible was discussed, and Mr. Marsh refers to it in his remarks.

F. A——, aged nine months, was admitted into St. Bartholomew's Hospital on May 8th, 1890. The patient, a well-nourished child, was quite well until about 6 P.M. on the previous evening, when he began to vomit. The vomiting continued up to the time of his admission, and blood-stained mucus was passed per anum, but no fæcal material. On admission, between 12 and 1 P.M., the child was pale and collapsed; expression pinched and distressed; pulse quick and feeble. The abdomen was somewhat distended, and a sausage-shaped tumour could be felt extending across the abdomen, a little above the level of the umbilicus—that is, in the region of the transverse colon. The child's condition was so grave that it was determined to perform abdominal section at once, without resorting to either injection or inflation of the bowel. At 2 P.M. he was placed under chloroform, and an incision was made in the linea alba, midway between the umbilicus and the pubes, and the peritoneal cavity was opened. It was then found necessary to extend the incision upwards to half an inch above the umbilicus. When two fingers were introduced the intussusception was plainly felt, and a great deal of it was easily reduced by pressure on its sheath, immediately below its lower or advancing end. The tumour was then drawn into the wound, and reduction was effected, partly by pushing and partly by drawing the volvulus out of its sheath. The inversion of the gut had evidently commenced in the immediate neighbourhood of the ileo-cæcal valve. The abdominal cavity was washed out with plain water at a temperature of about 100°, and the wound was closed throughout with silk sutures. Salalembroth gauze was applied and covered with a bandage.

May 9th.—The child had passed a rather restless night, and two doses of a quarter of a minim of tincture of opium had been given. He was fed with milk and lime water, only a few drops being given at a time. He had not been sick since the operation, and had passed two motions free from blood.

10th.—Doing very well; no bad symptoms.

11th.—Seems quite well; playing with his toys. Cheeks full and rosy. Temperature normal.

12th.—Bowels have acted three times since yesterday. Wound dressed to-day. Sutures removed. From this date there was nothing calling for remark. The child was discharged with the wound quite healed on June 1st.

Remarks by Mr. HOWARD MARSH.—The rteatment of intussusception by operation is a subject that stands in need of further discussion. The estimate formed by different surgeons, as to the risk involved in the operation itself, is far from uniform. Some believe that, when resorted to under favourable circumstances, the operation is attended with no great risk, but with an amount of success which no alternative treatment can secure; while others regard it as a measure of such doubtful utility that it should be resorted to only after everything else has been tried and has failed. The experience I have had has convinced me that, when the operation is performed early, it is not in itself a proceeding that involves serious danger; and secondly, that it is followed by a very large proportion of success. And I believe that, in the future, we shall be able to point to the operative treatment of intussusception, even in young infants, as one of the most satisfactory developments of abdominal surgery. The grounds for advocating early operative interference seem obvious. The conditions present are very similar to those that exist in hernia. In both the intestine is threatened with strangulation, which, if left, will almost inevitably lead to a fatal result, and which can be removed only by mechanical interference. In hernia the course to be adopted is agreed to on all sides. The case is regarded as one of urgency. The necessary interference consists, first, in carefully applied taxis, and then, if this fails, in immediate operation. And the treatment of intussusception should be pursued on exactly parallel lines. A well-ordered attempt at reduction by what Mr. Hutchinson has termed "abdominal taxis," should be made without a moment of unnecessary delay; and if this fails (and it should not be continued for more than ten or fifteen minutes), operative interference ought at once to be resorted to. Fortunately the evidences of intussusception—griping pains, sickness, the passage of mucus and blood, and the presence of a sausage-shaped tumour[2]—are usually distinct, while often the intussusception can be felt by examination per rectum. Thus a correct diagnosis can in the majority of cases be made at once. When this point has been reached, the question arises, In what manner can abdominal taxis be best employed? For myself, I prefer the introduction, when the patient is under chloroform, of warm water, by means of a long, soft tube, with which a funnel is connected; but this apparatus must be used with great care. The amount of fluid that is being injected should be observed, and the height to which the funnel is raised above the patient must, owing to the fact that the pressure on the intestinal wall is rapidly augmented when the height of the column of fluid is increased, be carefully guarded. Neglect of this point will be attended with imminent danger of rupture of the intestine. The abdomen should be watched as to increasing distension and as to tension of the parietes. These symptoms, however, are not, it must be observed, always a sure index to the safety of further injection, for if the intussusception has descended low in the colon and become adherent there, no considerable distension can of course be produced. Should taxis fail to effect reduction, abdominal section should be at once performed. As distension is generally absent or only moderate, and there is little tendency to the protrusion of the intestines, an incision, three inches or more in length, should be made in order to facilitate manipulation and to save time—a matter of the highest importance in these cases. Reduction is best effected by taking the sheath *in situ* just below the advancing end of the tumour between the index and middle fingers and exercising gentle pressure upon it, and then shifting the fingers and repeating the pressure so as to lift the intussusceptum upwards and make it "back out." By this means the tumour may usually be quickly reduced until only the entering end remains. When this is the case the intussusception should be brought forward into the wound, so that reduction may be completed, partly

[1] THE LANCET, vol. i. 1891, p. 198.

[2] Examination under chloroform is often advisable to assist the diagnosis.

by pushing the intussusceptum out by pressure on the sheath, and partly by very gentle traction upon it. It is very important that the parts should be well in view when the swollen head of the tumour is being returned, so that the amount of tension that is produced can be noted, and so that any laceration of the peritoneum, should it occur, may be detected and afterwards closed by suture. I am convinced that in the majority of cases reduction can be easily effected in the manner described, if the intussusception has not been strangulated for more than ten or twelve hours; but if strangulation has existed for eighteen hours and upwards, reduction is likely to be difficult and will often be impossible. In the case above related the age of the patient was nine months, and the intussusception had existed for about eighteen hours. In a successful case which I recorded in 1875[3] the child was seven months old, and the intussusception (which had apparently existed for fourteen days) had been strangulated for twelve hours. In both, at the time the operation was performed, the infants were in a condition of collapse; the one was pale, his face was pinched, his pulse quick and feeble, and vomiting was frequent; the other "lay in his mother's arms, vomiting every two or three minutes, with a pale shrunken face, half-closed eyes, a small and very rapid pulse, and shallow, hurried respiration." Yet both recovered without a drawback of any kind, and were convalescent on the third day; both, that is to say, notwithstanding their serious condition, bore the operation perfectly well, and rallied immediately after it. In the case which I published in 1875 the operation was performed in a labourer's cottage, with no antiseptic precautions. The intestines were for some minutes lying exposed outside the abdominal cavity, and the patient was subsequently nursed by its mother without skilled assistance. The facts observed in these two cases appear to constitute strong evidence that even young infants will bear the operation well. That failures have hitherto been frequent has been, I think, quite certainly due very largely to the circumstance that the operation has been delayed until the local conditions—swelling, inflammatory softening, and adhesions—have precluded success. These conditions are not usually present in the first twelve or even the first eighteen hours. I ought, however, to mention that in a case, under the care of Mr. Gay of Putney, in which I performed abdominal section about fifteen hours (so far as could be ascertained) after the occurrence of the intussusception, the volvulus had become universally adherent to its sheath, so that although the parts were well in view, and no inflammatory softening and only very limited swelling were present, it was impossible to accomplish reduction. The possibility of this rapid formation of adhesions is an additional reason for early interference. I have lately examined the specimens in the museum of St. Bartholomew's Hospital, with the view of ascertaining whether, when it is found that the head of the intussusception is so large and firm that it cannot be returned, it would be possible with safety to divide the sheath at the seat of constriction, and then, having effected reduction, to close the wound in the sheath by suture. The point, however, is one which I think can only be determined by trials made in what may seem to be appropriate cases at the time of operation. Other cases in which abdominal section for intussusception in young infants has been successfully performed have, I believe, recently occurred. Their publication, I may perhaps be allowed to say, would be a valuable contribution to this important subject.

LIVERPOOL NORTHERN HOSPITAL.

A CASE OF INTRA-CRANIAL ANEURYSM SUCCESSFULLY TREATED BY LIGATION OF THE COMMON CAROTID ARTERY; REMARKS.

(Under the care of Mr. CHAUNCY PUZEY.)

INTRA-CRANIAL aneurysm of sufficient size to present symptoms permitting of correct diagnosis and the trial of surgical measures to effect a cure is rarely met with, and this account of a case of the disease will repay careful reading. The onset of an audible bruit immediately after the accident, fourteen months before admission, appears to accurately define the duration of the disease, and the symptoms of the condition were unusually well marked. Mr. Puzey refers in his remarks to Mr. Rivington's excellent article on Orbital Aneurysms, and we find there mentioned that in four traumatic cases, out of fourteen of which the post-mortem examination is given, there were arterio-venous communications between the carotid and the cavernous sinus. Mr. Rivington refers to thirty-two cases of pulsating exophthalmos of traumatic origin, twenty-seven of which recovered and five died after ligature of the common carotid artery. "Of the twenty-seven patients who recovered after ligature, only seventeen were cured of the aneurysmal affection of the orbit, additional methods being employed in the others. Ligature of the common carotid is at present the most successful and satisfactory means of treating orbital aneurysm. The percentage of absolutely successful cases or cures would be about fifty-five." We have recently referred to the high mortality met with after ligature of the common carotid, and it is possible that in this case the earlier compression of the vessel aided in the efficient blood supply found after the application of the ligature.

E. E——, aged thirty-seven, a farm labourer from North Wales, was admitted into the hospital on May 2nd, 1889, and gave the following account of himself. He had always enjoyed good health until fourteen months ago, when he fell off a horse on to the left side of his head. He was semi-conscious for a day or two, the only thing he remembers being that on the morning after the fall he noticed "a noise like a steam-engine puffing in his head," just above his left ear, and this has continued more or less ever since. Both eyes were swollen at that time, especially in the morning, the left being the worse of the two. Four or five days after the accident he went to work, though the noise in his head much troubled him. He was unable to see clearly unless he covered one eye. Six weeks after the accident he went to the Liverpool Eye and Ear Infirmary, and remained there under the care of Mr. Edgar Browne.

Mr. Edgar Browne's report.—E. E—— was admitted on May 4th, 1888, his condition being as follows: Right eye: V. = $\frac{6}{18}$, slightly myopic, with −0·50 V. = $\frac{6}{6}$, T. and appearance normal; pupil active; nystagmic jerkings on extreme lateral deviation to either side; ophthalmoscope shows shallow physiological pit. Left eye: V. = idem, slight proptosis; movements in all directions limited, pupil active, but rather less so than the other. Conjunctiva injected, very large, tortuous, episcleral veins at the outer side; a full cushiony feeling on pressing eyelids. Pulsation of eyeball distinctly felt on pressure. Ophthalmoscope shows marked physiological pit, with vessels crowded to one side, as in a glaucomatous disc, with pale halo, no pulsation of arteries could be produced even by firm pressure. There is a loud aneurysmal bruit on the left side of the head, loudest in the temporo-parietal region, immediately over the left ear, and extending forwards; the sound becomes fainter on approaching the vertex, again increasing towards the lower parietal region of the right side. It is stopped entirely by moderate pressure on the left carotid. Diplopia is marked, being due to the left eye, which is unable to execute conjugate movements with its fellow, in consequence of orbital swelling. No implication of any motor or sensory nerve was observed, mental faculties unaffected. The diagnosis of intra-cranial aneurysm was made, and the treatment was—rest, full doses of iodide of potassium, low diet, fluid restricted to one pint per diem, and digital pressure on the carotid. Steady improvement went on for some weeks, interrupted once by the patient rising. Great relief from the noise resulted on one occasion from epistaxis. The orbital swelling receded and the diplopia disappeared so long as recumbency was maintained. The advisability of ligaturing the carotid was mentioned to the patient, but he preferred going home. He remained away from July 26th, 1888, to April 26th, 1889, when he returned with an aggravation of all the previous symptoms. The operation was now strongly urged upon him, and he was transferred to the care of Mr. Puzey.

Condition on admission into the Northern Hospital.—There is a swelling in the left orbit about the size of a Tangerine orange, the eyeball in the centre of it being much protruded and congested, the cornea hazy, and at one point showing tendency to necrosis; the eyelids are red and œdematous. The whole swelling pulsates, and the pulsation can be controlled by pressure on the left common carotid; large vessels (apparently veins) can be felt pulsating no pressing lightly on the swelling between the eye and the

[3] Med. Chir. Trans., vol. lix.

upper part of the orbital cavity. A loud bruit can be heard all over the left side of the cranium, from the middle line as far back as the posterior parietal region; but it is loudest in the supra-orbital and anterior temporal regions. The sound is of a loud "swishing" character, although the patient describes it as resembling the booming noise or "thud" of machinery, which, he says, prevents him from sleeping, except when quite worn out by exhaustion.

On May 5th Mr. Puzey ligatured the left common carotid artery above the omo-hyoid muscle. The operation was conducted with full antiseptic precautions, and the artery was tied with stout chromicised catgut ligature; the wound was closed with silver sutures, a thin horsehair drain being laid from end to end, and a small india-rubber tube passed into the deepest part of the wound. Pulsation ceased in the swelling as soon as the ligature was tightened, and never reappeared. As soon as the patient became sensible he exclaimed with delight that the noise had gone. However, on listening through the stethoscope over the eyebrow or near the root of the nose, a faint bruit, continuous, but accentuated with each systole, could be distinctly heard. Next day the dressings were changed and the horsehair drain was removed. On May 8th the dressings were again changed and some of the stitches removed. On the 10th the man had been moving his head about and had displaced the dressings, which were found soiled, and that night his temperature rose to 101·2°. Next day there was some redness and swelling about the wound, and the man complained of slight pain in swallowing. It was evident that there was retention in the deep part of the wound. This was therefore reopened to some extent by probe and dressings forceps, and a small quantity of thick pus escaped. Next day all pain had gone and the temperature was normal, at which point it continued steady, except on June 2nd and 3rd, when it ran up again, probably on account of fæcal accumulation in the lower bowel. The cornea had by this time given way, and the iris was adherent. A troublesome sinus, resulting from the re-opening of the wound, caused him to remain in hospital for some weeks, although he was able to get up and walk about. He was sent to the Woolton Convalescent Hospital early in July, and returned to his home in Wales a few weeks later.

On July 7th, 1890, he wrote saying that the noise in his head had entirely gone, the swelling about his eye had completely disappeared, that he was quite comfortable in every way, and was actively engaged in his usual employment.

Remarks by Mr. PUZEY.—In the article on "Orbital Aneurysm," by Mr. Walter Rivington, in Heath's "Dictionary of Practical Surgery," it is stated that "beyond question the great majority of the traumatic cases have been instances of endo-cranial arterio-venous communication, due to wound or rupture of the internal carotid artery in the cavernous sinus." I believe that this case was an instance. There was, however, one point on which I could not satisfy myself—that was, as to the continuity of the bruit; if there was continuity, it was completely masked by the tremendous and prolonged "swish" during the systole. But I think that the remarkable dilatation and pulsation of the supra-orbital branches of the ophthalmic vein pointed almost conclusively to the nature of the affection. And, furthermore, the persistence of the bruit (as heard through the stethoscope) after the operation, long after the disappearance of the noise heard by the patient and of pulsation as felt by observers, seems to confirm that view of the case. Surely, if this had been a case of true aneurysm the bruit would have ceased simultaneously with the notable pulsation. Although ligation of the common carotid is forcibly urged by Mr. Rivington as the best treatment, this is not the opinion held by some surgeons of eminence. Hence it seems desirable that cases bearing upon this point should be recorded. Some time ago my friend Mr. George Walker brought before the Ophthalmological Society a patient suffering from (apparently) a similar condition of affairs. He proposed to tie the common carotid, but was dissuaded from doing so by the adverse opinion of two well-known surgeons, who considered the case one of arterio-venous communication. This patient was accidentally cured in a very remarkable manner. He was squeezed and much frightened (to the extent of fainting) in a theatre crush one night, and next morning found that the noise in his head had ceased. Gradually the other symptoms disappeared, and complete recovery took place.[1] It appears probable that some fibrinous clot must have become partly displaced in the affected part during the excitement and struggling to which he was subjected; and so a cure was roughly brought about in the same manner as by the late Sir William Furgusson's more delicate and deliberate method of "manipulation." But, as Mr. Walker observed, it is not advisable to trust to the chapter of accidents. Perhaps in the next similar case hemiplegia, or sudden death, might be the result. In my case, nothing could be more gratifying than the delight and comfort manifested by the patient from the time when he first regained consciousness, after the operation, up to the present. He came to see me some weeks ago (a year and a half after the operation), and there was nothing to be seen of the former trouble except a small leucoma occupying the lower quadrant of the cornea. The eye had regained its natural size and appearance, and the pupil was clear. But the sight was lost, no doubt from long-continued stretching and atrophy of the optic nerve,—surely an argument against delay in operation.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Macrodactyly and other forms of Congenital Overgrowth.

AN ordinary meeting of this Society was held on Feb. 10th, the President, Mr. Timothy Holmes, in the chair.

Sir GEORGE MURRAY HUMPHRY communicated a paper on Macrodactyly and some other forms of Congenital Overgrowth and their Relations to Tumours, of which the following is a brief abstract. An account was given of six specimens and casts of the affection in the museum of the University of Cambridge, and of nineteen cases published in various journals. The affection consisted in an overgrowth of all the tissues of the part—bones, ligaments, tendons, skin, and more particularly of the fat and connective tissue—these tissues usually presenting their normal characters. The overgrowth continued to proceed after birth, often at a rate exceeding that of the rest of the body, and so as to call for removal of the part. The hands and the feet were about equally liable, and the digits on the radial and tibial sides more than the others. In some cases the overgrowth showed a tendency to spread, more particularly along the sole. Now and then it was symmetrical, and occasionally it was associated with fatty growths in other parts. Reference was made to congenital overgrowths of like nature in lips, tongue, and face; and an analogy was drawn between these examples of intra-uterine insubordination to the laws of development and growth, and the growths or "tumours" of later life, all or nearly all of which—simple and malignant—were referable to an abnormal overgrowth of the normally existing tissues rather than to a starting into activity of latent embryonic germs.

Mr. R. WILLIAMS found that the arguments which Sir George Humphry had used were almost identical with his own. Changes of growth and development which commenced before birth continued during the whole period of life. The force in action was of the kind known as "integrating force," and the failure of this was the cause of all abnormal growths. He referred to hypertrophy of the breast as another instance of the kinds which had been mentioned, for in it there was not only enlargement, but also a repetition of the normal structure. If growths could arise in the way described from normal structure, they were even more likely to do so from "tumour germs."

Mr. MARMADUKE SHEILD was anxious to bring before the notice of the Society a class of cases which he believed had not as yet been described. It affected young adults, and was associated with flat and sweating feet. There was an enlargement of the great toe, and much pain and inconvenience were referred to the metatarso-phalangeal joint. The soft parts became very bulky, so that in an instance he exhibited the patient was discharged from the army because he could not pull his boots on. He had excised the joint, but found that both bone and cartilage presented simple overgrowth. He asked the opinion of the author as to the condition of molluscum fibrosum, where large flaps of skin

[1] Ophthalmic Review, vol. vi., p. 209, 1887.

sometimes depended from different parts of the body. Patients in whom this occurred were occasionally also the subjects of bony and other morbid growths.

Mr. MACNAMARA referred to a case which had been under his care in 1881, in which the sclerotic presented a fibromatous growth; there was an exostosis of the lower jaw, and there were numerous elephantoid overgrowths of skin in various parts of the body.

Dr. ROBERT LEE, while congratulating the author on his paper, said that the propositions which had been advanced practically came to this: that congenital deformities were tumours and tumours were congenital deformities, and that all these changes and peculiarities were due to the same cause. But cases such as had been described differed both clinically and practically from tumours. He related a case which occurred thirty years ago of overgrowth of the arm of a girl, which began suddenly at seventeen. For this amputation was performed by Mr. de Morgan two inches below the shoulder and two inches above the diseased tissues. Immediately on removal he examined the arm, and found that there was a large cyst in the forearm connected with the radial nerve, and the latter was found to be degenerated even above the line of the healthy tissue. He held that cases of congenital overgrowth were essentially different from ordinary tumours, and to state otherwise was to go beyond facts. He had seen very many children with a congenitally enlarged eye or ear in whom no other peculiarities developed. Causes of a subtle nervous kind were probably often at work in producing these overgrowths, but these causes frequently remained unnoticed. The theory of "included germs" he imagined was not now believed in greatly by pathologists, and he concluded by expressing his conviction that these congenital intra-uterine departures from the normal were not tumours, though they might take on the same form.

Sir GEORGE HUMPHRY, in reply, said that he had of course met with many instances of hypertrophy of the mammary gland, though he did not remember any cases which had existed from birth. He had not endeavoured to collect the whole of the instances of those forms of congenital overgrowth which had been recorded, specimens of which existed in several London museums. Mr. Sheild's case was an instance of faulty arch with an elongated inner side of the foot, the great toe becoming more prominent, more liable to injury, and hence it became increased in size. He regarded the molluscous condition as one of localised hypertrophies taking place at the same time, but in different parts, in the same way that fatty tumours sometimes originated. He had not made the statement that these overgrowths were tumours, but he pointed out that there was a gentle gradation from simple overgrowth through nævi, warts, and polypi to the malignant tumours. A similarity of morbid phenomena appeared to produce both, and there was insubordination to the normal laws of growth. As in malignant neoplasms there was insubordination to the ordinary laws of growth of epithelium, so in the case of an enlarged toe there was insubordination to the normal laws of growth of the fœtus. Thus were brought into a like gradation those processes which seemed to be the most dissimilar. He could not agree that the theory of "tumour germs" had been given up; on the contrary, it was still commonly accepted, and it was this fact which had induced him to bring forward his remarks, in the hope of showing that the pathology of tumours might be attributed to another cause.

MEDICAL SOCIETY OF LONDON.

Debate on Angina Pectoris.

THE ordinary meeting of this Society, held on Feb. 9th, the President, Mr. Knowsley Thornton, being in the chair, was occupied with the discussion of a paper by Dr. Douglas Powell on Angina Pectoris. The debate was not concluded, and was adjourned for a fortnight.

Dr. DOUGLAS POWELL opened a discussion on the subject of Angina Pectoris, in respect of which he observed that there were many questions awaiting solution, and without which the most satisfactory treatment of this anxious and often deadly malady was hardly possible. He urged that the subject should be considered on a broader basis than had so far been accorded. It was not such a simple malady as had been thought. The characteristic symptoms ranged between the wide limits of remediable functional disorder on the one hand and fatal organic lesion of the cardio-vascular system on the other. He referred to the case of a lady aged forty-five, of neurotic temperament, who had complained of disturbed cardiac action for five years past. There was an old history of rheumatic fever fifteen years before; and five years ago, when riding hard across country, she was seized with severe cardiac pain which interfered with respiration. These symptoms recurred on subsequent occasions. The pulse was peculiar—it was small, cord-like, and of high tension. On using hard pressure with one finger the pulse was felt almost as well, if not quite as well, by a second finger placed further along the vessel. This phenomenon was due to a back wave from the periphery. The heart's action was somewhat laboured, intermitting twice in the minute; the first sound was muffled, but there was no distinct murmur. He then proceeded to give the definitions which had been proposed for this malady by various authors from the time of Heberden. The case above related he regarded as one of the first degree or one of vaso-motor angina in which the vascular system was unduly sensitive, the arterioles contracting suddenly under slight stimuli, thus raising the blood-pressure, which habitually ranged high and caused the heart to labour painfully. He observed that one noticeable feature in this variety of the disease was a kind of ambulatory uneasiness, the patient being fidgetty and restless. In regard to this vaso-motor form of angina, he remarked that it was of comparatively recent discovery, and the prognosis in such cases must necessarily depend largely upon the prior condition of the heart. He regarded the vaso-motor disturbance as an essential factor in the majority of cases of angina pectoris, just as bronchial hyperæsthesia was in cases of asthma. He believed it to be possible for the heart to succumb to these attacks without itself being affected with any obvious lesion. He referred to the case of a medical man aged thirty, who consulted him on account of paroxysms of breast-pang. He had recently lost his wife and had been much worried. On examination there was no evidence of enlargement or disease of the heart, and he regarded it as an example of vaso-motor angina. A six months' rest from work left him in a condition in all respects apparently sound. He referred to another case in a gentleman aged sixty-eight, who had long resided in the colonies, who could foretell these attacks by the pallor and deadness of his hands, and in whom a marked improvement in the general condition occurred after an attack of gouty eczema. He remarked on the rarity of a fatal issue in these cases, the attacks if unrelieved by art usually coming to a natural end, probably through the depressor nerve of the heart, and possibly through some analogous mechanism of the small vessels, under the stimulus of pressure, inhibiting and controlling cardiac and vaso-motor spasm. Cases were met with in which patients subject to this disease, having died of something else, exhibited no cardiac lesion. He agreed with Dr. Broadbent's suggestion that some cases of fatal cramp whilst bathing were probably due to sudden oppression of the heart from contraction of systemic arterioles; in fact, to vaso-motor angina of an intense kind, with perhaps a fatigued heart. Though physiologists maintained that when systemic arterioles were contracted by cold the visceral were dilated, and *vice versâ*, yet it was highly probable that under certain conditions of chill and emotion the whole arterial system might respond. He quoted cases which seemed to show that the right side of the heart had borne the brunt of the anginal attack. The persistent cardiac distress and rigid arteries of uræmia might almost be described as chronic persistent angina, though it was with the cases of so-called cardiac asthma in uræmia that the analogy with vaso-motory angina was strongest. He then passed on to discuss the angina pectoris gravior, where the vaso-motor disturbance was associated with degenerative cardiac disease. He questioned the view that the disease was necessarily caused by or associated with disease of the coronary arteries. The prognosis in the first group was favourable for many years, the probability being that death would ensue from some other cause, such as cerebral hæmorrhage, while in the last group an almost certainly fatal result might be anticipated within a short period. Both for prognosis and treatment it was important to make out the precise condition of the heart in respect of size, position of impulse, and power. For the treatment of these two varieties nitrite of amyl and nitro-glycerine were of great

value, but far more so in the graver cardiac cases. In the first group they required to be associated with nervine tonics and sedatives, while in the second carminative stimulants were of special value. He compared the pain in sudden cases of death from angina to that associated with embolic gangrene in the limbs. Dr. Powell then described a syncopal variety of angina, which was rare except in persons over sixty-five, and was usually associated with gout, the subjects of it having a slow and irregular pulse. He suggested that some undue acidity of the blood might be concerned in its causation. The attacks were often associated with dyspepsia, and the treatment indicated was careful feeding, peptic tonics, and gentle exercise, with hot drinks and carminatives during the attacks. In conclusion, he said he regarded angina as a disturbed innervation of the heart and vessels associated with more or less intense cardiac distress and pain, and a general prostration of the forces, always producing anxiety, and often amounting to a sense of impending death. The sub-groups were four in number—viz., angina pectoris vaso-motoria, angina pectoris gravior, primary cardiac angina, and syncopal angina. The first two forms bore a remarkable resemblance to their respiratory analogue, asthma.

Dr. ORD insisted on the remarkable parallel between asthma and angina, and he pointed out that the term asthma formerly comprehended a great number of varieties of difficulty of breathing. It had been pointed out by statisticians that in times past asthma was a very fatal disease according to the returns, its having become less so was probably due to better diagnosis. With regard, however, to angina the condition was rather different; at present people would have a larger range for angina than formerly, especially if they adopted Dr. Powell's conclusion. The old limited definition to which he alluded would certainly have to be extended to a larger number of cases in which one or two only of the constituent typical symptoms of the disease as first described would be present. Such cases might perhaps be termed "anginous" or "anginal." He then entered upon the consideration of the immediate causes of this condition, comprising vaso-motor disturbances, arterial tension, heart weakness, either of wall or of valve, or of both, and, lastly, those due to inhibitory and depressing influences. He pointed out that these anginoid attacks usually came on in the day-time, and the prognosis was notably aggravated when they occurred at night. He compared the two classes of cases, one in which the patient had angina on exertion as the consequence of sudden arterial tension; these patients very commonly had a weak heart, and so the extra strain thrown on the right side of that organ by the exercise precipitated the anginal attack. The other group was that of patients who had the attack independently of muscular exertion, and in these he thought the mechanism was probably through the nervous system, either emotionally or by reflex. He had seen illustrations of both classes. One of the aggravated conditions of attacks primarily anginous and determined by movement was the occurrence of these attacks by night. He insisted on the importance of dyspepsia as a factor in bringing about the attacks, and observed that if he were restricted to one remedy in the treatment of angina he would prefer sulphate of magnesia to nitro-glycerine. He mentioned the frequent coincidence of glycosuria with angina, which, he thought, authorised the inference that the visceral blood-vessels were dilated and not contracted, as the author seemed to suppose, along with the superficial vessels. He said that the connexion of gout with angina ought not to be forgotten, involving as it did a neurosis and changes in the chemical constitution of the tissues. Consequently treatment directed to the gout often relieved the angina. He insisted upon the fact that no sensations of anginous type were to be treated lightly, or the patient left without a proper explanation of the danger, with the precautions which became necessary.

Dr. BROADBENT said he had been unable to make up his mind as to the condition of the heart during the paroxysms. Sometimes the pulse was irregular and small, sometimes there was high arterial tension, sometimes not, and sometimes the pulse was practically unaffected throughout an attack even of great violence. The central fact, after all, in attacks of angina was that the heart was beaten, either by peripheral resistance or on account of failure of its own powers, and that fact fitted in very well with the author's classification. It was especially in those cases due to weakness of the heart that great danger arose. He pointed out that vaso-motor resistance alone would not be sufficient to determine the attacks. The proportion of cases of high arterial tension without angina pectoris was very much greater than the proportion of fatal cases of angina in which there was no disease of the coronary arteries. He presumed that disease of the coronary arteries acted by causing degeneration of the muscular fibres. It should not be forgotten that in bed and during sleep there was the upward pressure of the abdominal viscera and the curious running down of the cardiac powers to account for the supervention of the attacks. Some cases commenced with acute aortitis, leading to interference with the coronary circulation, causing a series of anginoid attacks, resulting in physical evidence of progressive cardiac failure. He pointed out that muscular exercise lowered very rapidly the resistance of the peripheral circulation, and the effects of exercise were mostly felt on the right side of the heart. With reference to the neurotic theory, he pointed out that the vast majority of anginal cases did not occur in the neurotic sex, for it was extremely rare in women. He bade them, therefore, beware of attaching too much importance to an unexplained neurosis. The occurrence of angina in gouty people he ascribed to its association with high arterial tension. He had also noted the existence of a myocarditis in patients suffering from glycosuria accompanied by high arterial tension, and this was usually associated with marked anginal paroxysms. He remarked on the fact that angina was seldom or never associated with mitral lesions, and anginal symptoms usually subsided on the supervention of a mitral lesion in a person subject to anginal attacks. His own experience seemed to show that the gravest cases of angina were those in which no reasonable explanation could be found to account for the symptoms.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

A MEETING was held on Friday, Jan. 2nd, Mr. John Poland, President, in the chair.

Supra-pubic Cystotomy.—Mr. W. JOHNSON SMITH, Seamen's Hospital, read a paper on this subject. Allusion was first made to the fact that not only in operation for free opening of the bladder, in which modern improvements, such as distension both of bladder and rectum, came into play, but also in simple puncture and aspiration, most surgeons at the present day operated above the symphysis pubis and not by way of the perineum. In cases of retention in which the bladder could not be relieved by way of the urethra, puncture above the symphysis and temporary retention of a fair-sized cannula would, it was held, be far preferable to repeated aspiration. Supra-pubic cystotomy was advocated as being a more beneficial procedure than the perineal operation in cases in which drainage of the bladder was indicated. After reference to the value of the high operation in the removal of certain forms of stone and of new growths from the interior of the bladder, more or less prolonged drainage by the supra-pubic method was commended as a valuable aid to the treatment of severe stricture, female fistulæ, and other affections of the urethra, especially in cases in which the urine had been rendered foul by chronic cystitis. Mr. Smith also showed two very large calculi he had removed by the supra-pubic method.

The Essential Principles in the Treatment of Constitutional Syphilis, of Soft Chancre, and of Gonorrhœa in the Male.—Dr. ROBERT S. WAINEWRIGHT, in a paper under the above title, gave three methods of treating the earlier stages of syphilis: 1. The radical cure, or Hutchinson's plan: small doses of mercury are given for a very prolonged period, with a view to prevent the appearance of tertiary and even secondary symptoms. 2. The ordinary London plan: treat the symptoms of syphilis as they arise by the internal administration of mercury. 3. The expectant, or Edinburgh plan: use only local applications to cure the earlier syphilitic manifestations, and avoid giving mercury internally. This he thought the best method of treatment. The tertiary stage of syphilis should be treated by very large doses of iodide of potassium (30 to 60 grains ter die). Soft chancre often produces a bubo, which should be treated as a soft chancre of the gland, not as a mere inflammation. Gonorrhœa in the male, if treated in the earliest stage by capsules of sandal wood oil (10 to 15 minims ter die), can often be cured in a fortnight or less, as the urine is thus rendered completely antiseptic.

Reviews and Notices of Books.

A Guide to the Operations on the Brain. By ALEC FRASER. London: J. & A. Churchill. 1890.

BROCA'S discovery of the site of the faculty of articulate speech was first made public in 1861, and Ferrier's work on the Functions of the Brain was published in 1876. Many anatomists abroad and in this country have endeavoured to lay down rules for defining the situation of the more important fissures and convolutions. Foremost among our own countrymen have been Turner, Hare, Reid, Horsley, Thane, and Cunningham. The keystone of such work has hitherto been to define the position of the fissures of Rolando and of Silvius and of the convolutions that surround them.

The work before us is a fresh proof of the energy and thoroughness with which British anatomists are seeking to further the progress of surgery. Although professing itself to be a guide to operations on the brain, the plates are of such excellence and the dissections of such merit that no teacher of anatomy can afford to dispense with such a ready exposition of parts of the body which frequently vary, and concerning the relations of which much difference of opinion exists amongst writers.

The major part of the book consists of forty-two life-size plates in autotype, and this is preceded by a short but pregnant description of the mode in which the work has been accomplished, and of the serial dissections so far as they have been reproduced. There is no attempt to deal with the subject of localisation of function, but the method of demarcation is entirely different from that usually adopted in the text-books, in that the scalp is marked out by a series of tapes into sections with which the various areas of the brain are seen to correspond. This idea is probably a development of that of Hefftler, who drew his outlines with different coloured pencils. The tapes are placed in longitudinal and transverse directions, according to a prescribed system. It is to be regretted that the measurement adopted has been by inches, and not according to the metrical system. By means of composite views, the lines of these tapes are shown on the skull and their relations to the parts of the brain exhibited in the succeeding plates remain. The author finds that the pinna varies so much in size and position that any result based on lines drawn from any part of it is of little value from a practical or any other point of view. The divisions of the convexity of the brain have, with certain minor additions, been marked according to the widely-accepted description of Ecker. The plates which show the external surface of the brain are, perhaps, the most worthy of study of the whole series, not only for the artistic manner in which they are produced, but also on account of the extreme care and minuteness with which the dissection of the parts of the cerebrum, cerebellum, and of the cranial, dorsal, and cervical nerves has been carried out, though the latter are even better shown in some of the later pictures. The reproductions of the dissections of the interior of the brain are unequal, but all are of the greatest interest, and many display variations in the disposition of parts which have not hitherto been accepted. The practical value of these plates is well exemplified by the series exhibiting the course and position of the posterior horn of the lateral ventricle and the thickness of the hemisphere between it and the bone through which it may be reached from a spot behind the pinna indicated by reference to the tapes. In describing the relations of the deeper-lying structures to the surface of the scalp, the author points out that although the keynote of his remarks is, that for normal heads after birth the position of any structure of importance in their cavities varies proportionately with the variations of the circumference as given by the circumferential tapes of the respective heads, yet, as is mentioned later, when indicating the plates upon which the author would depend for guidance in opening the skull on account of lesions of various specified parts, that as the circumference of the heads illustrated varies from 20¼ to 23½ inches, after shaving the scalp, this being the average variation of adult heads, the surgeon may dispense with the rule and select the plate where the measurements are nearest to that of the patient. Furthermore, the relations of the cranial sutures to the scalp surface, both in the adult and the child, are shown to be indicated exactly by the disposition of the tapes, as are also the relations of the middle meningeal and its branches with the dura mater, though the plate illustrating this point is not so distinct as are most of the others.

The series of plates which will probably be of the greatest practical value are the composites showing the relations of the external surface of the brain to the scalp. These are from every point of view, and were taken from eighteen different heads. All the relations of the various tapes, as can be seen at a glance at the several heads, are the same in the young and in the adult, and exhibit in a very striking manner the proportional relationships of the external surface of the brain in heads varying in circumference from 14¼ in. to 23½ in.

The plates illustrating the central lobes and lateral ventricles and their relations to the scalp are less satisfactory than the majority of the series, but their practical utility is not diminished, since the relations of the island, the anterior horn of the lateral ventricle, the descending horn and the hippocampus major to the tapes and spaces can be seen at a glance, as well as those of the optic thalami, the caudate nuclei, and other parts in the lateral and third ventricle. The relations of the lower part of the lateral lobe of the cerebellum in the adult and in the child can be better appreciated from the system of demarcation here adopted than by any description, and these plates are of the most instructive value. By prolonging the median longitudinal tape to the lower part of the neck in the adult, and to the lumbar region in the child, a series of accurate guides are offered to the surgeon to reach every cranial and spinal nerve, of which the dissections are most carefully executed and beautifully shown. With regard to the plates themselves, which are reproduced from the negatives by some modification of the Collotype process, there is room for no comment but that of praise. The distinctness of detail and the expression of light and shadow leave nothing to be desired in almost every instance, and where these are deficient the fault was probably unavoidable, and lay in the negatives rather than in the reproductions. The photographs were taken from above with a camera having a draw of 4½ ft., supported on a vertical pillar of special construction, which can be raised if needed to a height of 10½ ft., so that the least distance between the lens and the object is 6 ft. After focussing with a No. 3 Waterhouse diaphragm, a special one is substituted, having a diameter of about one centimetre. It seems somewhat surprising that the author should have found it necessary to resort to this very elaborate mechanism to obtain his results. No pillar, however well constructed, can at such length be free from such vibration as must imperil the accuracy of outline, even in a long exposure such as is needed with so minute a stop, especially when the backs containing plates have to be changed. Again, the idea of making a different exposure for plates that have to be kept is contrary to the experience of all photographic artists, as there is no evidence of the continuing action of light upon the film; and even if this were

proved, a very slight experience should allow of its accurate correction during development. With regard to the lens adopted—a rapid rectilinear of 29 in. equivalent focus,—it would seem preferable, upon purely optical grounds, to use one of very much shorter focus, and to obtain the diagrams upon a $6\frac{1}{4} \times 4\frac{3}{4}$ plate, from which they could be enlarged to the required size. This would give a considerable saving in time as well as in expense. Nor need the matter of registration be one of difficulty if a simple process well known to photographers be adopted. These, however, are details which the author has had to consider before finally adopting the process by which his results have been obtained; and when it is considered that the work before us represents only a modicum of the labour which has been undertaken, and gives no account of the many and inevitable failures which have been encountered, we must admire the more the patience and energy which have been bestowed upon it. The opening sentence of the preface gives hope that this volume is but the prelude to others, and surgeons and anatomists will alike look earnestly for every fresh series of such accurate delineations of human anatomy.

A Manual and Atlas of Medical Ophthalmoscopy. By W. R. GOWERS, M.D., F.R.S., F.R.C.P. Third Edition, Revised throughout, with numerous additions and additional Illustrations. Edited with the assistance of MARCUS GUNN, M.B., F.R.C.S. London: J. & A. Churchill. 1890.

THE appearance of a third edition of this work testifies to its continued appreciation by the profession. The present volume has not been materially altered from the form in which the book originally appeared. The most noticeable change is the omission of the appendices devoted to the use of the ophthalmoscope and to the descriptions of clinical cases, and the substitution of a brief but useful and practical account of methods for sketching the fundus oculi. The whole work has been subjected to a revision sufficiently thorough to involve additions and alterations on almost every page and in almost every paragraph, and an endeavour has been made to embody in it whatever of real value has been added to our knowledge since the appearance of the last edition. Considerable development is noticeable in connexion with the accounts of tuberculosis, malignant disease, gout, retro-bulbar neuritis, and the congestion and neuritis in alcoholism. A fuller account is given of the effects of poisons, and a separate paragraph is devoted to bisulphide of carbon as the apparent cause of peri-neuritis. On account of this extension the text now occupies 298 pages instead of 256, but owing to the omissions previously mentioned the entire book has thirty-two pages less than the second edition, and is altogether more compact.

In spite of the more widely extended use of the ophthalmoscope, with part of which former editions of this work may be credited, observations relating to the appearance of the fundus oculi in disease are still scattered and infrequent, and a complete account of the various changes is more than can be reasonably expected at the present time. The volume affords a ready means of reference, and forms a valuable compendium of such knowledge as we already possess on the subject. The microscopic figures that were represented on photo-lithographic plates in preceding editions, have been re-engraved as phototype blocks, and though they have lost somewhat in size, sharpness, and shade contrast in the transference, they undoubtedly are more conveniently placed in the text of the work in connexion with the subjects to which they refer. Other ophthalmoscopic figures prepared in the same way have also been added, noticeably sketches illustrating septic emboli and hæmorrhages in ulcerative endocarditis. The coloured plates have been judiciously left as in former editions. Admirably executed and taken from well-selected cases, they convey an excellent idea of the pathological appearances. The adoption of mono-chrome in the majority of them serves to concentrate the attention on the form and light and shade effects, and secures a more exact representation of delicate pathological appearances than can be obtained by chromo-lithography. The last edition is certainly an advance on the previous ones, and the book fills a useful place in medical literature.

THE LATE DR. MATTHEWS DUNCAN.

IN beginning his course of clinical lectures on Jan. 29th, at St. Bartholomew's Hospital, Dr. Champneys referred to his predecessor, Dr. Matthews Duncan, in the following terms:—

Gentlemen,—The same thought is probably occupying the minds of all of us to-day—the thought that a voice to which most of you have listened with pleasure and with great profit for many years no longer fills this theatre; that a presence embodying the dignity and the learning which was characteristic of its owner has disappeared from among us for ever. This would, in some sense, have been the position under any circumstances, for to each of your teachers, and to me in my turn, must come the time of retirement, when, in the words of the old Roman poet Ennius, he

"Senio confectu' quiescit."

And yet how different are the circumstances from what we might have hoped and should have chosen for him. A man of less indomitable will would perhaps have taken warning earlier, would have sought relief from some of the duties which were his greatest pleasure, as they were also his most engrossing work. But he would not yield; he struggled on in harness till, as you all know, and some of you saw, he broke down in the act of instructing you, and after a vain effort to tide over the few weeks which remained of last summer session he left the country of his adoption—to die. This great hospital has lost, the profession has lost, the country has lost, the world has lost—how much can I say? But you and I have also lost in a special way, for had his absence to-day been due merely to his inevitable retirement, it would have been my endeavour to try to prevent that retirement from being absolute; it would have been my endeavour to persuade him to come among us from time to time and to give us lectures, which I should have delighted to hear side by side with you, and which his great learning and rich experience would have made, I feel sure, no unpleasant task for him. But *dis aliter visum*, and that dream is over. But besides this I have lost a kind and dear friend, from whom I might have learnt very much regarding the management of this great department, the changes which have taken place during my absence of ten years, and the prospects of the future. These I must learn without this help. Gentlemen, I stand before you as a stranger, and yet the kindness which I have experienced on my return seems to forbid me to use such a term. Standing as I do in the place of the greatest obstetrician of our time, I ask you to continue to me the goodwill which I know from him that you never failed to show, and, as a motto for us all, I would say, "May the spirit of James Matthews Duncan preside over all our meetings."

THE CITY OF LONDON TRUSS SOCIETY.—The annual report of this Society was submitted to the governors at a meeting in Finsbury-square last week. The committee recorded the fact that the income of the Society had been fairly maintained. The total receipts for the twelvemonth amounted to £4698. The expenditure was £5030. The committee acknowledge the aid of the late Lord Mayor in presiding at the annual festival. The accounts which accompanied the report showed that, inclusive of the loan by the bankers, the balance in hand at the close of the year was £785. Mr. J. W. Long expressed regret that the committee had been obliged to recommend the sale of a further portion of the invested funds, but this had become necessary since they, as in the case of many other institutions, had been dispensing in the form of charity more than had actually been received.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 14, 1891.

THE "revised scheme" published by the Senate of the University of London in June, 1890, has provoked so much opposition from the provincial colleges, and proved so unacceptable to the Royal Colleges of Physicians and Surgeons —especially to the latter,—that its provisional acceptance by the Councils of University and King's Colleges has not been sufficient to induce the Senate to lay it before Convocation, which is the necessary preliminary to applying to the Privy Council for a new Charter on the bases laid down by the Senate. That scheme has now been withdrawn and replaced by another, which was passed by the Senate on the 4th inst., and it is understood that this will be the final attempt made by that body to solve the problem referred to it by the Royal Commissioners; but as it has hitherto proved so pliable in endeavouring to please everybody by departing from its old traditions, we should not be surprised, if any exception be taken to the provisions of this scheme, to see still another "latest revised" scheme forthcoming. We publish the scheme on page 391, and invite the careful attention to its clauses of those of our readers who are interested in university education in London, and in obtaining degrees for London medical students on similar terms to those on which they can be obtained in the other centres of medical education. Doubtless we shall soon be favoured with an expression of opinion from those bodies which are specially interested in this scheme of reconstitution.

We must first point out that the scheme differs in its very essence from that recommended by the Royal Commissioners. Their recommendation was, "that the teaching institutions of a University of London, in the proper sense of those words,—a university intended to have as to teaching a proper metropolitan character,—ought in our judgment to be in or near London. For other parts of the kingdom (as for the colonies) it is sufficient that there should be access, as heretofore, to examinations and degrees. To bring in from all parts of the kingdom teaching institutions having no special connexion with London might have results similar to those of the former system of affiliation, when in like manner extended. The powers which might be given to such institutions would greatly, if not wholly, neutralise the value of the share in them granted to the colleges in London. The university, so constituted, would not be what is wanted; it would not be a teaching university in and for London. On this point, therefore, our opinion is that the metropolitan limit should be adhered to." In the scheme of last year, which was accepted by University and King's Colleges, this recommendation was adopted; in the present scheme, influenced by the powerful opposition of the provincial colleges, it has been thrown overboard, and clauses are introduced providing for the admission of provincial Fellows on the Senate (3, vi. & viii.); for a Standing Committee of the Senate for the Faculties of Arts and Science in connexion with the provincial constituent colleges (14); for the admission of provincial colleges as constituent colleges (26); for the formation of provincial faculties (35), and of provincial boards of studies (44). Their duties and functions and their relations to examinations and degrees in science and arts will in every case run *pari passu* with those assigned to the London teaching colleges. To the principals and chief officers of these provincial colleges are allotted four seats on the Senate, six being given to University and King's Colleges, and to the provincial faculties four, against twelve to be elected by the London faculties. Two questions naturally arise from a consideration of this part of the scheme—(1) Will University and King's Colleges agree to this wide departure from the former scheme of June, 1890, and from the distinct recommendation of the Royal Commission, which is everywhere adverse to the admission of the provincial colleges as constituent colleges? If they accept a practical equality with the provincial colleges, any hope of a *real* Teaching University in London may be given up. (2) Will the provincial colleges and faculties be satisfied with a smaller representation on the Senate than that allotted to the two London teaching colleges and the London faculties? If not, the scheme, which is already enlarged to a Senate of fifty-two members, must be recast. The Royal Commissioners recommended the much more convenient number of thirty-eight, and the former scheme only formulated a body of forty-two.

We now turn to the provisions for facilitating the granting of medical degrees to London students on equitable terms. The words of the Royal Commissioners on this point are: "As to medical degrees, we think that a standard of attainment appropriate for honours ought no longer to be required by the University for an ordinary or 'pass' degree." To carry out this recommendation, a Standing Committee of the Senate for the Faculty of Medicine will be appointed, consisting of the Presidents of the two Royal Colleges, the two Fellows elected by the said Colleges, the five Fellows elected by the London Faculty of Medicine, one Fellow holding a chair in a provincial constituent College of Medicine, and nine members to be elected by the Senate. (16.) The special clauses laying down the terms on which a "pass" M.B. degree is to be granted are the following:—

"47. The Senate shall have power to enter into arrangements with the Royal Colleges for conducting the examinations in anatomy, physiology, medicine, surgery, and midwifery, for the pass M.B. degree by a board of examiners, consisting of the examiners appointed by the University, and examiners to be appointed by the Royal Colleges, who shall join in the reports to the Senate on such examinations. The examiners appointed by the University may be called upon, if the Senate so think fit, to make in addition separate reports. These examinations may, if so agreed on, be conducted in combination with examinations for the Royal Colleges. The arrangements for giving effect to this clause shall be carried out under the direction of a committee to be appointed in equal numbers by the Standing Committee for the Faculty of Medicine, and a committee to be appointed by the two Royal Colleges. Such arrangements to be subject to the approval of the Senate and of the two Royal Colleges. This arrangement for joint examination shall not lessen or interfere with the duty of the

Senate to be satisfied as to the adequacy of the examinations in all respects.

"48. Candidates for degrees in the Faculty of Medicine to show that they have passed through the required courses of instruction in one or more of the constituent colleges in that faculty, or of the recognised medical institutions."

The latter paragraph corresponds word for word with that in the scheme of June, 1890, but in the former paragraph a most material alteration has been made. In the older scheme a board of examiners was to be formed for conducting the medical examinations for the pass M.B. degree, consisting of examiners appointed by the University and of examiners appointed by the Royal Colleges; but in the new scheme it is added that "the arrangements for giving effect to this clause shall be carried out under the direction of a committee, to be appointed in equal numbers by the Standing Committee for the Faculty of Medicine and a committee to be appointed by the two Royal Colleges, such arrangements to be subject to the approval of the Senate and *of the two Royal Colleges*." The Senate will therefore not only delegate the conduct of its pass M.B. examination to a joint Board of Examiners partly nominated by itself and partly by the Royal Colleges, but will give up the supervision of the arrangements for this examination to a joint committee of the University and of the two Royal Colleges. As the Standing Committee of the Senate for the Faculty of Medicine must largely consist of Fellows of one or other of the Royal Colleges, this arrangement will practically and definitely place the granting of the pass M.B. degree of the University into the hands of the Royal Colleges, whose approval of the arrangements, as well as that of the Senate, is requisite. Are the medical graduates of the University prepared for this transfer of the University privileges to the Corporations? Have the Royal Colleges altered the arrangements of their examinations on the lines laid down by the inspectors appointed by the General Medical Council, or have these recommendations practically been ignored? These questions will probably occur to the medical graduates when this scheme of the Senate for surrendering the real control over the most important part of its duties, so far as medical degrees are concerned, comes before them in Convocation for their consideration. The Senate has in this paragraph conceded the main point raised by the College of Surgeons in its contention with the College of Physicians, so that now both of the Royal Colleges will probably agree to the scheme. We cannot think that the Senate has behaved well to the Fellows of the Royal College of Physicians by ignoring their acceptance of the former proposal, which was undoubtedly the just one—i.e., that with due representation of the Royal Colleges on the Senate, the medical examinations should be placed under the direction of the Standing Committee of the Senate for the Faculty of Medicine, and not of a body partly under other jurisdiction and control. Even so late as Dec. 19th, 1890, the committee of that College unanimously resolved in favour of "a distinct standing committee, having special charge of the London work of the University in Medicine, analogous to the provision in arts and science"—that is to say, a standing committee of the Senate only. Now, apparently, that standing committee of the Senate as a whole is to have to do only with honours degrees, and the Royal Colleges are to have as much power as the Senate in granting pass degrees. There are two further questions which were mooted during the deliberations of the Colleges on the old scheme, which are not mentioned in this—viz., the *direct* representation on the Senate of the London medical schools, and the amount of fees to be paid by the candidates for the pass M.B. degree. Will the Royal Colleges persist in their former demand for direct representation of the London medical schools in addition to those proposed to be elected by the London Faculty of Medicine (3, vii.)? Will the Senate agree to the raising of its fees for the pass M.B. examinations in accordance with the existing scale of fees now charged by the corporations for their conjoint diplomas, £36 15*s.*—a larger sum than is charged by any other examining board, whilst its own honours degrees may be obtained at the moderate cost of £5 for each of the three professional examinations for the M.B. degree? The future decisions on these points will be awaited with great interest by the medical students and medical teachers of London. We cannot but direct attention to the clumsy arrangements by which the work of the reconstituted University is to be carried on. A Senate of fifty-two members is too large for the exercise of any real control, and hence the future prosperity and work of the University must depend on the wisdom and general agreement of no less than six standing committees, in some cases with opposed interests—viz, that for arts and science in connexion with London colleges, for arts and science in connexion with provincial colleges, for arts and science for non-collegiate students, in medicine, in laws, and in connexion with the Royal Colleges for the pass M.B. degree. This is the substitute for London which is proposed by the Senate of the University in the place of a real teaching university modelled on the lines of the Scotch Universities, the Victoria University, or the older Universities of Oxford, Cambridge, and Durham.

IN the last number of the *Annales de l'Institut Pasteur* there appears (from the Bacteriological Laboratory of Val-de-Grâce) a most interesting paper on tetanus by Drs. VAILLARD and VINCENT, which appears to throw very considerable light on the subject of tetanus, and to clear up a number of points and observations that have hitherto been enshrouded in obscurity. After describing the organism, and identifying it with that already made familiar through the papers of recent writers, the authors give it as their firm opinion that in cases of artificial inoculation of pure cultures it is always the poison introduced along with the bacillus, and not the organism itself, that acts upon the animal. This indeed seems to be probable, as they are able to prove that almost inconceivably minute doses of this poison, which they compare with snake poison, are quite sufficient to produce all the symptoms of most acute tetanus; in fact, it was almost impossible, from some of the cultures that they obtained, to administer a dose that was not lethal.

An exceedingly interesting feature brought out in the course of their work is that in no case was the poison developed as soon as the organism began to grow; in fact,

gelatine cultures of the tetanus bacillus were never capable of producing toxic symptoms until liquefaction of the gelatine had commenced, when spores were demonstrated to have been formed, and when the peculiar disagreeable odour so characteristic of tetanus cultures had become perceptible. They associate both the odour and the peptonising power with the formation of the poison in the cultures. That it was not due merely to the presence of the spores that the material was poisonous they demonstrated by heating their cultures to a temperature of 62° C. for a short time (a temperature which is quite incapable of interfering with the vitality of the spores), when it was found that cultures so heated and introduced by inoculation into a rabbit or a guinea-pig failed to produce any tetanus, thus proving that although the spores are not killed the poison had been destroyed by the heat. The spores were proved to be living by making fresh cultures from them in artificial media; after a time they grew luxuriantly, and if left to grow for eight or ten days produced another crop of the poison. By simply washing away the poison from the spores with distilled water they also obtained similar results, for, although the spores could still develop and form the specific poison in artificial media, they were, when inoculated, incapable of giving rise to any symptoms of tetanus. From the reaction to heat of a substance they were able to separate, and from its resemblance to the diastases in other respects, they conclude that they have obtained from tetanus cultures the true tetanus poison, a poison, however, that cannot be formed by the tetanus bacillus in healthy tissues. The micro-organisms are here so rapidly attacked by the leucocytes that they are rendered *hors de combat* before they have time to form their poison.

It has for long been well known that the tetanus bacillus could not develop in the tissues except, apparently, in the presence of other organisms, and the suggestion is offered that these other organisms act in one of two ways: they either paralyse the activity of the leucocytes, or they draw off, as it were, their attention and activity from the tetanus bacillus, thus allowing it sufficient time to develop its characteristic products. It is interesting to note that Drs. VAILLARD and VINCENT consider that in many respects the tetanus bacillus is extremely like the diphtheria bacillus, the method of action on and in the organism being essentially the same in the two cases, the above factors in all probability playing a part in diphtheria much as in the case of tetanus; and it is evident that in studying the one poison much light may be thrown on the other. BEHRING and KITASATO appreciated this fact, and combined their forces to work out the question of immunity in these two diseases. It is obvious, however, from a consideration of some of the points that are indicated in this paper, that there are many sources of fallacy that will have to be eliminated before the ultimate explanation of the condition of immunity in protected animals can be given. The facts that this poison is active in such extraordinarily minute quantities, and that the micro-organisms are able to grow with such difficulty in the human tissues, allow us to hope that extremely minute changes in the blood may be quite sufficient to secure the alteration or breaking-down of the virulent poison, even when it has become diffused throughout the system. So long as the organism is localised to the wound, there is of course more chance of coping successfully with the disease, although here, as in other diseases, there always appears to be the possibility of the poison exerting such a paralysing influence on the cells that usually take up foreign substances, that secondary septic conditions may be liable to occur even when the action of the tetanic poison can be antagonised so far as its primary effects on the cells are concerned. One question appears to be set at rest, and that is, as regards tetanus and diphtheria, the ptomaines have had their day, whatever may become of the products of other organisms. It may be accepted that here, at any rate, we have some subtle poison which, although it has not yet been actually separated, has been so far isolated that it may be taken as proved that it is not an alkaloid or basic poison. A most remarkable feature is that, in peptonising gelatine with the filtrate from a meat-broth culture of the tetanus bacillus, the poisonous properties are lost to a certain degree in direct proportion to the amount of gelatine that is peptonised; this, taken in conjunction with the fact that the properties are not developed until the gelatine begins to liquefy, has led Drs. VAILLARD and VINCENT to suppose that the same agent that peptonises the gelatine is the active agent in bringing about the development of the toxic symptoms of tetanus.

A phenomenon that may give us some cause for concern, in considering the phase on which recent bacteriological research has entered, is that many of these poisons by their presence in extremely minute quantities in the fluids of the body may interfere in a very marked degree with the exercise of the functions not only of nutrition, but of those of excretion, by which it is possible that two sets of changes may be set up. Protected animals or individuals may die from septicæmia, just as they may succumb with symptoms of septic poisoning after the introduction of jequirity infusion or after mild snake-bites; we may, however, have a more chronic process similar to that sometimes described as resulting from the injection of sterilised tubercle products, a condition which has recently been described as a kind of marasmus. We shall no doubt pass through this stage of bacteriological inquiry to find that in some cases inoculation may be resorted to after the patient is actually attacked, as in PASTEUR'S treatment of hydrophobia, though scarcely as a preventive measure; whilst in other cases—those in which the immunity seems to be conditioned by other factors—protective inoculation will still be continued, and with excellent results.

One lesson to be learned from these inquiries on tetanus and its etiology is that we should be encouraged to continue the search for the vegetable or animal micro-organism that is probably the etiological factor in hydrophobia. Of course, it must never be lost sight of that the hydrophobic virus may be formed only within the body, and even by the cells of the body under the stimulation of the special poison or ferments produced elsewhere; but such a method of formation is so utterly different from anything that has yet been met with in the biological world that for the present the

micro-organismal rather than the humoral pathology of rabies must be accepted, even though it has as yet not a single fragment of *direct* evidence in its favour.

AN article of more than usual interest and importance appears in the current number of the *Edinburgh Review* upon the recent progress of sanitary reform. The importance which the reviewer claims for his subject is by no means overstated, and his summary of the leading features of the history in this department of the past fifty years will do something, and should do much, to awaken and instruct the public appreciation, both of what has been done and what can yet be done to improve the conditions under which, especially in towns and unhealthy areas, human life has to be spent. The tone of the present article is none the worse for being a little optimistic; indeed, optimism is, and always has been, the inspiration of all successful effort for reform. It is, perhaps, not desirable that the public at large should look too complacently upon the existing organisation of what may perhaps be called the sanitary services, but a review of the work actually accomplished by what has, upon the highest estimate, been up to the present time a modest legislative enterprise, justifies the confident anticipation that well-directed effort in the future will yield results of inestimable importance to the community at large, and in particular to those classes which in the past have borne the brunt of bad sanitary conditions.

It is not, however, with the reviewer's summary of past events that we are chiefly concerned, although these are of sufficient interest, but with his suggestions for reform. Even here the field over which he ranges is too large for us to accompany him throughout its whole extent. And, indeed, his suggestions upon some parts of his topic are somewhat too vague for useful discussion in their present form. Thus, for example, it is by no means necessary that one should be an enthusiastic admirer of the existing organisation of the Public Health Department to refrain from discussing the creation of an independent Secretaryship of State charged with the exclusive care of sanitation. Such a reform may or may not be desirable in itself, but it is certainly not the most pressing matter connected with this subject at the present time. Nor is it even ripe for discussion. Similarly we may postpone the question, interesting enough from our own point of view, whether the medical profession could be relied on to furnish, if necessary, a succession of men fitted not only in a professional sense, but also in respect of statesmanship, to undertake the control of such a department. For the present it may be sufficient to say that we take a sanguine view of the matter, and that when the time comes we shall be prepared to support our opinion in discussion. The controversy is not, however, of a kind that we have any disposition to precipitate.

A matter of more practical importance is the suggestion conveyed in the present article that hospitals and medical charities should be brought under the efficient control of a Central Board of Health. This is a question not only of capital importance in itself, but one on which at the present time the public mind is more than usually exercised. The Committee of the House of Lords, however strictly limited may be the scope of its inquiries, can hardly construct a report which will not have a large significance in relation to institutions beyond the metropolitan area, and even within that area all the problems which hospital organisation presents have to be faced and dealt with. But it is above all things necessary, in attacking this subject, to remember that it is complicated by the fact that these institutions are very largely dependent upon voluntary public support. To deal with them in these circumstances is a matter of no ordinary delicacy. The stream of charity may easily be diverted by the advent of official directors and the circumstances of official control. The idea that he who "pays the piper" is entitled to call the tune is so ingrained in the mind of the modern Englishman that it would probably be found a perfectly impracticable project to combine official administration with voluntary support. Any scheme of control by Parliament or Parliamentary officers would need to be supplemented by a sufficient—that is to say, a complete—provision of Parliamentary funds out of which the institutions could be maintained. This is the *crux* of the problem, and it is well that it should be frankly stated and fully realised at the very outset of any attempt at solution.

But there is, short of public control, the wholly different matter of the full publication of statistics, sufficient to make it possible to establish instructive comparisons between various institutions, which is deserving of the most careful consideration. We do not discover in the article any indication that the writer has in view this very material consideration. It is open to doubt whether at the present time it would be possible to devise a perfectly satisfactory organisation of the medical charities upon a new basis. It may well be that a competent central authority would be able to effect a great, even enormous, economy of the present overlapping and badly organised work of these institutions. But he would be a bold man who should undertake to lay down the lines of any such scheme upon our present information. A decade spent in organising knowledge on such a subject would be time well employed; and although we confess to some diffidence in accepting what we understand to be the full meaning of the writer's somewhat indefinite suggestions, we shall cordially concur in any steps that may be taken to secure for the public full access to all the facts which tend to show how the field of charitable sick relief is occupied; to what extent the various workers in it are aiding, and to what extent they are impeding one another; where the work is most efficiently done, both in a professional and in an economic sense, and where and how failures in these respects are to be detected and remedied. It cannot be doubted that in the absence of organisation many errors of administration, and perhaps some of aim even, have crept in. As matters stand, that, even where most regrettable, should not be matter for reproach; and nothing would tend more both to soften the asperities of criticism and point the way of reform than the systematic collection and effective dissemination of authentic and exhaustive statements of fact.

BEFORE continuing our notice of Dr. LAWSON'S paper on the results of the repeal of the Contagious Diseases Acts it is desirable to correct an error into which we fell last week.

It appears that the paper was prepared at the request of Dr. F. J. MOUAT, the present President of the Royal Statistical Society, and not at that of the late Dr. GRAHAM BALFOUR, who was too ill at the time to take any active part in the Society's work.

In the paper of Surgeon-General LAWSON the records of syphilis show very considerable fluctuations at various periods. Thus, among the Dragoon Guards and Dragoons in the United Kingdom annually from 1830 to 1837, and those of the same force and Foot Guards (chiefly quartered in London) from 1837 to 1847, with their millesimal ratios throughout; among the Dragoon Guards and Dragoons the mean ratio of primary venereal sores was 79·5 per 1000. It was 72 per 1000 in 1830, 96 in 1832, 80 in 1833, 95 in 1834; after which it went down to 63 and 62 in 1836–38. Similar fluctuations were observed among the Foot Guards, the ratio varying from 107 in 1837–38 to 217 in 1843–44. Similar fluctuations occurred in gonorrhœa, but in different years, and not quite so pronounced. All this was long prior to the year 1864, when the first Contagious Diseases Act was passed, hence the importance of these fluctuations when comparing different years with one another.

It is well known that, for the purposes of comparing stations under the Acts with those not under them, fourteen of the latter were selected for comparison, and were called "fourteen stations never under the Acts." These were: Isle of Wight, London, Warley, Hounslow, Pembroke Dock, Sheffield, Manchester, Preston, Edinburgh, Fermoy, Limerick, Athlone, Dublin, and Belfast. The fourteen stations under the Acts were Devonport and Plymouth, Portsmouth, Chatham and Sheerness, Woolwich, Aldershot, Windsor, Shorncliffe, Colchester, Winchester, Dover, Canterbury, Maidstone, Cork, and Curragh. Besides these two sets of stations was a third, designated "all the stations never under the Acts." In 1860 at the fourteen stations which came under the Acts in 1864 and subsequently, the ratio of primary sores was 146; at the fourteen unsubjected stations 134, and at all the stations never under the Acts 131. From these points all fell, so that in 1862 they stood at 117, 103, and 99 respectively. In 1863 the admissions at the fourteen unsubjected stations rose to 117, while those at the fourteen subjected were 107, and at all the unsubjected 108. The compulsory examination began to take effect in 1867, and though there was an increase of the incidence of the disease on the country as indicated by rises in the ratio of 17 per 1000 in both the fourteen and whole unsubjected districts, that at the fourteen stations under the Acts was 4 per 1000 only; and from this year the ratios at the fourteen subjected stations were always much under those in the whole until 1884, the last year of the comparison. In 1871 the incidence of the disease on the country seemed at its lowest, being 93 for the fourteen unsubjected stations, 81 for all the subjected, and 51 only for the fourteen subjected. The stoppage of pay showed its effects in 1874 by a fall at each class of stations, which was continued in 1875, and still traceable up to 1877, after which the advance of another epidemic wave caused a rise at the fourteen unsubjected stations of 40 per 1000, at all the unsubjected of 20, while at the fourteen subjected it was 4 only. In 1879 there was a slight reduction of the ratio at both classes of unsubjected stations, but a rise of about the same amount at the fourteen subjected; but in 1880, with the cessation of stoppage of pay, there was a general rise, amounting to 39 at the fourteen unsubjected stations, to 37 on the whole unsubjected, and to 27 at the fourteen subjected stations; a portion of this was no doubt due to an increasing incidence of the disease over the country, but a large portion also to the removal of the inducement to conceal primary forms of the disease by stoppage of pay. The beneficial effects of the Acts will be seen by the following figures. In 1860 to 1863, when no Acts were in force, the ratio of primary sores at the stations subsequently protected by them was 129·8. In 1870 to 1873, the Acts being then enforced in all, it fell to 52·5. Secondary syphilis fell from 39·9 to 20·2; gonorrhœa from 134·6 to 100·3. At all the stations never under the Acts the fall in primary sores was from 116·3 to 86·0, in secondary disease from 30·5 to 27·4, and in gonorrhœa from 116·1 to 93. At the fourteen unsubjected stations primary sores fell from 120·6 to 107·9; secondary syphilis rose from 31·6 to 31·8; gonorrhœa fell from 112·1 to 71·6. In 1880 to 1882, stoppage of pay having terminated, the ratio of primary sores at the protected stations was 75·6, secondary syphilis 26·6, gonorrhœa 99·0. At all the stations never under the Acts the ratio of primary sores was 123·0; that of secondary syphilis 32·5; gonorrhœa 110·4. At the fourteen unsubjected stations the ratio of primary disease was 175·9, of secondary syphilis 38·9, and of gonorrhœa 128·4.

The Acts were suspended in 1883, and wholly repealed subsequently; the separation of the tables has not been continued since 1884. The ratios of disease among all the troops are as follows:—

	Primary Sores.	Secondary Syphilis.	Gonorrhœa.
In 1860, ratio per 1000 of admission	140	36	133
In 1885, ratio per 1000 of admission	127	27	121

From this it will be seen that the ratio of disease has returned to what it was in 1860 before the first Act was enforced.

There are many other interesting points in Inspector-General LAWSON'S paper which show immense pains, great research and a most thorough knowledge of the whole subject. Enough has been given to show the benefits of the Contagious Diseases Acts and the disastrous results of their repeal. We hope to give later on some statistics from Malta showing the benefits of this legislation there, and also some figures on the Royal Navy and the civil population of the stations under the Acts, which Dr. LAWSON was unable to adduce previously.

WE are informed that the electrical exhibition which is to take place at Frankfort-on-the-Maine will have a section devoted to illustrating the medical aspect of the subject. The applications of the constant and induced currents to the diagnosis and treatment of internal diseases will be demonstrated, and models of apparatus for electrolysis and galvano-cautery will be shown. Rheostats and other apparatus for the careful application of the current to medical purposes are to be exhibited. The value of the latest advances of electricity as applied to medicine will be shown by several exhibitors.

Annotations.

"Ne quid nimis."

NEW SCHOOL OF HUMAN ANATOMY AT CAMBRIDGE.

THIS building, which is one of the finest and best suited for its purpose in the kingdom, with large dissecting room above, well lighted by northern skylights and side windows, spacious museum beneath, rooms for study for the students, rooms for the professors and other teachers, and various requisite appliances, was inaugurated on the 29th ult. by an interesting lecture on the History of Anatomy in Cambridge, delivered by Professor Macalister in the large lecture room. Beginning with Caius, who on his return from Padua, where he graduated as M.D., and where he was acquainted with Montanus and Vesalius, introduced the study of practical human anatomy into England, and provided for its being carried out in the College known by his name in Cambridge, which he founded in 1557, Professor Macalister referred to the probability that Harvey, who was a member of the College, here acquired his first knowledge of anatomy. He gave a short account of the works of Glisson, Wharton, and others, who had prosecuted the science of anatomy in Cambridge, and of the various persons who had held the chair of Anatomy from the time of its foundation in 1707 to Sir Busick Harwood, Clark, and Humphry. The lecture was greatly applauded by the large audience. At the conclusion Sir George Humphry congratulated the University on the fact of this spacious and well-arranged building being devoted to the study and teaching of human anatomy, on the interest shown in the event by the large audience assembled in that splendid theatre, and on the lecture they had just heard from one who to his many acquirements added that of as extensive a knowledge of the history of anatomy as that of any living man. He trusted that the classes might long remain as large as they now are, and that Professor Macalister might long be spared to teach and direct them.

THE LONDON WATER BILLS.

THE present session will have an especial interest for water drinkers in London, for the reason that the whole question of metropolitan water-supply will almost certainly be investigated by a Parliamentary Committee or by a Commission. Already three Bills relating to this subject have been published. One promoted by the City Corporation proposes to constitute a Water Commission to acquire the undertakings of the several water companies and to improve the water-supplies. The constitution of the Commission is deserving of notice, because, if the Bill become law, it will be representative of the London County Council, the City Corporation, and the several County Councils in the watershed of the Thames. The Corporation has shown considerable skill in thus bringing to its aid a number of Corporations and County Councils who may be expected to view with satisfaction a scheme which would place the London Council in a position very different from that it would occupy if the Corporation had to fight it single-handed. It cannot, however, be expected that the Bill will pass, nor is this probably anticipated by those who promote it; but it serves to show that the Corporation does not intend to sink permanently into the position of a district authority without some effort to prolong its existence. The Bill will probably not be regarded with favour by the sanitary authorities in the areas of the County Councils to whom this overture is made by the City Corporation, for it is obvious it would at once be the occasion of constant warfare between the councils and the sanitary authorities, for the latter would no longer be permitted, as now, to discharge sewage into the rivers. It remains to be seen whether the Corporation will get more good by the support of these councils than harm from the opposition of the sanitary authorities. The second Bill, which is backed by Sir Algernon Borthwick and other private members, proposes the constitution of a Water Trust, consisting of thirty-nine members; also for the purpose of acquiring the undertakings of the water companies. The members of the Trust are to be elected by the county electors of the water area. But their existence is not to be permanent, for the London County Council are to be empowered in 1892 to replace them. It remains to be seen whether the London County Council will be satisfied with this proposal, or whether they will not desire to deal directly with the water companies. The third Bill restricts itself to proposing that all water consumers shall, if they elect, be supplied by meter. This Bill is backed by private members, and will doubtless be considered by the same committee as that appointed to deal with the others. It cannot be expected that any of these measures will become law, but they will afford ample fighting ground for the several interests concerned, and it is probable that the number of such Bills will be increased before the session has terminated.

EDINBURGH UNIVERSITY CLUB.

THE quarterly dinner of this club took place in the Holborn Restaurant on Tuesday evening, the 10th inst. Before the dinner the annual meeting of the club was held. The reports of the secretary and treasurer for the past year were submitted, and showed the club to be in a most flourishing condition. Under the presidency of Dr. J. G. Glover, one of the direct representatives of the profession for England in the General Medical Council, a very pleasant evening was spent. In proposing the "Health of Alma Mater," in a most felicitous speech, Dr. Glover recalled the fact that this was not the first time that he had had the honour of presiding, and referred to the many distinguished men who had in his remembrance occupied the same position, such as Mr. Syme, Sir Robert Christison, and others. He pointed out various reasons or tests by which a University system can be judged. Thus a prominent feature ought to be the fact of exciting in her graduates gratitude and affection, which he said existed in all the graduates of Edinburgh University throughout the world. The very existence of this club was a standing proof of this sentiment taking hold of the graduates of Edinburgh. A University system ought also to stimulate the intellectual and educational ambition and ardour of the people of a country. This was eminently the case with the Universities of Scotland, which had succeeded in getting within the range of academic influence a large proportion of the people of Scotland. He also showed that the Universities of Scotland had produced great and exceptionally influential men, and enumerated many of their sons, as Hume, Cullen, Joseph Black, Dugald Stewart, and Lord Brougham, who was one of the founders of the London University, and many others who, as students and graduates of Edinburgh University, had been promoters of education—popular, professional, and scientific. Dr. Potter proposed the toast of "Our Guests," which was replied to by Mr. Thomas Wakley, jun., and Mr. Lamb. Dr. George Harley, in a eulogistic speech, proposed health, prosperity, and domestic happiness to the chairman, who suitably acknowledged the compliment.

WORK IN DENTAL SURGERY.

IN his interesting inaugural address the President of the Odontological Society, Mr. S. J. Hutchinson, reviewing last year's work in dental surgery, said that there had been fruitful and instructive discussions on anæsthetics, and the introduction of gas and oxygen as a safe means of prolonging insensibility; cocaine had been found by many to be successful as a local anæsthetic, though he doubted whether it was as useful as nitrous oxide. He strongly protested against the aid of hypnotism being invoked for the purposes of dental operations as long as the present average of success with nitrous oxide was maintained; "the influence of 'gas' is purely toxic, whereas hypnotism calls into play both mental and moral phenomena, which are degrading to the patient and dangerous to the operator." The greater scientific knowledge of the power of antiseptic agents had rendered it possible to make healthy the roots of teeth which a few years ago would have been condemned as useless, and render them capable of carrying artificial substitutes. However, he had come across a French work dated 1816 which contains an illustration of a case of "bridge work." He thought it was cheering to watch the efforts which were being made to produce for incisors fillings and inlays which imitated the colour of the natural teeth rather than disfiguring them by elaborate and extensive displays of gold. Speaking of antiseptics, Mr. Hutchinson said he had been trying some experiments with compressed oxygen in the treatment of septic roots, and hoped that these experiments would be supplemented by those of others. Mr. Cartwright's words in 1856 with reference to the L.D.S. diploma were, he thought, fully realised, and it was in the hands of the dental profession to maintain the prestige of that diploma by constantly raising the standard of the examination.

OPPOSITION TO THE NOTIFICATION ACT AT LINCOLN.

THE Mayor of Lincoln lately convened a public meeting in compliance with a requisition largely signed by working men to discuss the adoption of the Notification Act. The following resolution was passed with only three dissentients: "That this meeting is of opinion that it is unnecessary to adopt the Notification of Disease Act, on account of the low death-rate in the city, and also undesirable on account of the very great expense it would incur on the ratepayers; and this meeting respectfully requests the members of the Corporation not to adopt it." We cannot congratulate the supporters of the motion on their arguments or even on their facts. The chief argument used was the invasion of private freedom involved in the Act, and the enormous profits that were to accrue to medical men. One of the speakers stated that one medical man had received for one week in notification fees £12 10s. in half-crowns, whilst another had notified fifty cases in one day. It produced no effect on this gentleman to have it explained that the fifty cases received in a day were not from one man, but for a whole district. He refused to withdraw his statement. He would have been still more incapable of perceiving that notification stops the occurrence of fresh cases, and so limits the work and profits of medical men. Another speaker argued that when an infectious case happened in a crowded house the healthy children should be all removed and the sick one left in charge of the mother. There remains the argument of the "Englishman's house is his castle." The answer to this is twofold. First, that notification is not necessarily any invasion, or leads to invasion. Secondly, that the castle is already liable to invasion for sufficient reasons, and that of all reasons none could be more sufficient than the welfare of the Englishman himself and his family, and of all the families round about him, and that the invasion will be conducted always in the most considerate manner. Dr. Lowe made a candid and powerful speech. He said that on first looking at the Act he was not in favour of it, but that since the subject had been completely thrashed out he saw a very great amount of good in it. His estimate of the cost of notification for Lincoln was £40 or £50 a year. For some time to come, however, Lincoln is to enjoy freedom to have and to harbour any amount of infectious disease.

UNREGULATED MEDICAL PRACTICE IN SIERRA LEONE.

WE have received from Dr. I. Nichol Paris, Secretary of the Sierra Leone Medical Association, a very unsatisfactory account of the unchecked quackery and irregular medical practice which obtain in the colony, and especially in Free Town itself. We regret not to have space for this letter. But we must point out that such a state of matters is discreditable to the Government of the colony. Sierra Leone is a colony of whose Government better things might have been expected. It must be well on to a hundred years since Winterbottom, the physician to the colony, wrote a classical book on the diseases of the natives of Africa. And there are now in Free Town a dozen well-educated and registered medical men. It is due to them, as well as to the population, which consists of 9000 Christians, 5000 Mahommedans, and 8000 Pagans, to enact a Registration Act by which at least the people may know educated men from bonesetters, herbalists, abortion-mongers, pill-vendors, and quacks of all sorts.

ACTION FOR MEDICAL CHARGES.

IN an action before Mr. Justice Stephen and a special jury, brought by Mr. O'Reilly of Highgate against the executors of the late Mr. Ernest Matthews, to recover the sum of £86 odd for medical attendance chiefly on Mrs. Matthews, the executors disputed the claim as excessive and paid £34 into court. Mr. Kennedy, Q.C., and Mr. T. Smith were for the plaintiff; Mr. Waddy, Q.C., for the defendant. The account was for about seventy attendances altogether. Mrs. Matthews died; also Mr. Matthews. The charges were justified by the plaintiff on account of the anxious nature of the case, taking up much time and involving the administration of chloroform. The jury found for the plaintiff for £60, including the sum paid into court. His lordship gave judgment accordingly, with costs.

THE MIDWIVES' BILL.

IT is remarkable that, amid the rending discords of the gynæcological and obstetric branch of the profession, there is one subject on which there seems to be comparative unanimity. The Obstetrical Society at one of the largest meetings ever held, while hesitating to endorse the present Bill, with all but unanimity affirmed the past action of the Society in the following resolution: "That the Fellows of the Obstetrical Society approve the policy pursued by the Society for the last twenty years, and respectfully request the Council to continue their efforts to obtain for these women suitable education and legal registration." The demand for some legislation to prevent incompetent women from practising midwifery is really all that is asked for. A correspondent in THE LANCET of to-day complains that the opponents of all legislation for the present have carried the war over the Bill into the quiet waters of the Medical Defence Union. This does seem to be a very questionable piece of judgment. The Medical Defence Union is doing admirable work now, with perfect unanimity in the society. It would be a misfortune if it were distracted from its own line of duty by being made the arena of every

stray agitation that arises in the profession. But this is a matter on which the members of the Defence Union must make up their own minds. We content ourselves with pointing out the responsibility of those who endanger the peace or the efficiency of a society which was founded for very different purposes than that of supporting the present race of untrained and irresponsible midwives. We say irresponsible, for they commence and continue practice now, to the number of about 10,000, without anybody's leave, and, apart from the grossest misconduct or malpractice, are unhindered. Last week, again, a midwife was committed for manslaughter for her treatment of a case. But short of such terrible tragedies as this, the ten thousand go on with a sort of legal status, to the injury of women and of the profession alike. We revert to our suggestion of a select committee that should take evidence on this grave subject in all its aspects. The question must be disposed of. If the present state of the midwife class is the highest attainable in a civilised country, where thousands of women cannot afford the fees that any self-respecting medical man can take, the question will be set at rest, and the medical profession, which is now almost the only depository of knowledge on the subject, will have transferred to the Legislature its responsibility.

"THREATENED MEDICAL STRIKE IN SCOTLAND."

HOWEVER humiliating it may be for the countrymen of Sydney Smith to admit, we have to confess to being indebted to Scotch assistance, almost as severe as a surgical operation, for full perception that the account of a threatened strike among our brethren in Scotland is all a hoax. We will not begrudge our northern friends the sweet revenge they obviously feel in the success of their well-acted part. We may confess that we were not looking for jokes from that quarter. More remarkable than the *naïveté* with which we accepted as serious the description of hard work and scanty pay in Scotland, which really are serious in England, is the oversight with which, by an obvious *lapsus pennæ*, Sir Andrew Clark's name was inserted instead of Sir Walter Scott's. The quotation was actually made from one of the novels of Sir Walter Scott, who was a friend of Mungo Park. Sir Andrew Clark of course was not born at that time. It is gratifying to find that the grievances of unremunerated medical labour in Scotland are so slight as only to supply material for a joke. We may by our inadvertence emphasise the fact, and so suggest to some of our readers who find their work hard and unremunerative in England to try their luck in the more jocose part of the kingdom north of the Tweed.

THE NEW GENERAL HOSPITAL, BIRMINGHAM.

THE question of an appropriate site for the new hospital has caused considerable anxiety to the committee, and has also given rise to some discussion, or rather expression of opinion, in the local press. After much consideration, aided by the experience of two architects, Mr. F. Willmot and Mr. F. Osborn, the committee selected the site of St. Mary's-square as the most suitable, and have recommended it to the governors for adoption. In the face of the extreme difficulty in obtaining a sufficient quantity of land in a central position, this seems to be the most feasible plan presented. It is true that it is not an ideal site, but it is also true that it is the best which could be obtained under the circumstances. It is central, in the midst of a thick population, fairly near to the two railway stations, is 30 ft. higher than the present hospital ground, and is on a gravel foundation. The area obtainable under the promises of a good subscription list would be about three acres and a half, which would be sufficient for a hospital of 300 beds built upon modern principles. There is also free space around, which will serve the purposes of light and ventilation, and which might be available for recreation ground. The position would not interfere with the other large hospital—the Queen's—and would be undoubtedly favourable for the medical school. With the present project of a large central hospital, it is impossible to resist with reason the conclusions arrived at by the committee that this is the best obtainable site, and that it bids fair to answer the purposes for which it is intended.

EFFECT OF TEMPERATURE ON THE RESPIRATION.

DR. R. ODDI, who has been investigating the effect of external heat upon the gaseous exchange in respiration, has shown that the exchange is inversely proportional to the temperature, so that the lower the temperature the greater the elimination. This fact is by no means new, for Lavoisier was aware of it; though the interpretation he gave of it was incorrect, as respiration is not the simple act of combustion that he imagined it to be, but a highly complex series of chemical changes, which have for their object the nutrition of the cellular elements; for, as Luciani has shown, it is necessary that all substances should pass through the living cells of the body tissues in order to undergo change and decomposition. Hence it is impossible to have respiratory exchange without the cellular elements, and nutrition and the production of heat are not identical. Moreover, from Dr. Oddi's experiments it appears that there is no variation in the relative quantities of the different substances taking part in the respiratory changes, and that there is no special nervous mechanism employed, but that the nervous system as a whole takes part in it. The same may be said as regards the production of heat. The experiments alluded to were conducted on rats, but Dr. Oddi proposes to supplement them by observations on other animals.

THE LINCOLN WATER-SUPPLY.

THE subject of the water-supply of Lincoln is engaging much public attention. In 1885 Dr. Harrison, the medical officer of health, called attention to the defects attaching to the present system, and he now again urges that the matter ought not to be shelved, and this especially in view of the impurities reaching the service through the river Witham. Dr. Harrison's detailed account of the varying circumstances by which the present supply is injuriously affected should suffice to convince the Town Council and the inhabitants that his recommendation that the time has fully arrived for providing the city with a sufficient and wholesome supply is one that cannot be set aside with impunity.

"ASTASIA-ABASIA" IN GRAVES' DISEASE.

DR. EULENBURG of Berlin discusses in a neurological journal the state described by P. Blocq as "astasia-abasia." The author points out, first of all, that no consensus of opinion exists between Blocq and others who have written on the subject as to the true meaning of this morbid condition. Some consider it to be a mere symptom of a hysterical nature, while Blocq himself looks upon it as an independent morbid condition due to spinal lesion; Binswanger connects the symptoms with hypochondria, while Eulenburg observed a case of astasia-abasia during the progress of Graves' disease in an anæmic girl of eighteen, which shows that, apart from hysteria, a morbid condition may exist, not only comprising the symptoms represented by Blocq's description, but completely agreeing with their course and the effect produced on them by treatment. The girl had been treated for four months, and the goitre had not only considerably decreased, but the exophthalmos had almost entirely disappeared; palpitation and pulse became

less frequent, and her whole nutrition had also considerably increased, when suddenly both her legs seemed to become paralysed. She thought she had caught cold in a draughty passage. No other symptoms supervened. On examining the patient as to her sensibility and power of walking, the author diagnosed astasia-abasia, with a kind of self-suggestion as cause, as the patient had been seized once during the early part of her treatment with a sudden fear and consequent inability to pass over bridges. Psychical treatment was consequently indicated. The author informed her that a very painful and powerful remedy alone could do her good, but that this would cure her with certainty in a very few days. He applied faradism for about ten minutes below the knee and on the leg and foot most energetically, with rubefacient and of course painful effect. He then recommended some indifferent liniment and proposed to repeat the application of the faradic brush on the next day. Improvement was observed the same day, and one repetition of the treatment entirely cured the astasia-abasia.

MEDICAL BIBLIOGRAPHY.

THERE is no lack of periodicals the purpose of which is to compile in a well-ordered way a list of the medical and scientific contributions to literature. Foremost among these stands the monthly *Index Medicus*, established in 1879, a work of the greatest value, and one which is deserving of more support than it receives. Of much older foundation, for it is now entering on its forty-fifth year, is the quarterly publication *Bibliotheca Medico-Chirurgica*, edited by Gustav Ruprecht (Göttingen), which, besides being fairly complete, is remarkably cheap. Then last year appeared M. Rouvier's *Revue Internationale de Bibliographie*, also established as a quarterly, and published in Paris and Beyrouth, but which with the present year comes out in altered form, as a monthly periodical in which abstracts, and not the mere titles of papers, are given. It can hardly, however, aspire to the position attained by the world-famous *Jahrbücher* of Virchow, Hirsch, and of Schmidt. Besides these and many annual publications in all countries devoted to the same object, some of the recently established weekly *Centralblätter* afford very copious bibliographies. Indeed, the keeping pace with the growth of medical literature, with a view to record merely what is being written, has become a distinct branch of itself.

THE BONDING OF SPIRITS.

SOME interesting evidence has already been given before the Select Committee of the House of Commons, which was appointed to consider whether it is desirable that certain classes of spirits, British and foreign, should be kept in bond before they are allowed to pass into consumption, and also to inquire into the system of blending British and foreign spirits in or out of bond. It may be assumed that the object held in view by the committee is to determine whether it would not be more desirable that new spirit should, by being held in bond for some time, become matured, or, in other words, that the fusel oil, to which are attributed the injurious effects of the new spirit, may, on keeping, become so changed or oxidised as to render the spirit more palatable and more wholesome. According to the evidence of one expert, the aroma and flavour of spirits, at least in the case of pot-still spirits, were dependent upon the character of its own peculiar fusel oil, so that if fusel oil of any other origin were added the character of the spirit became quite altered. But it seems very doubtful if fusel oil is ever purposely added to a spirit, and as it is invariably present in greater or less quantity in new spirit, the objectionable symptoms which are produced from drinking such spirit are assigned to the fusel oil which chemical analysis shows it to contain. The same witness tried experiments on himself. He consumed daily for nineteen days three fluid ounces of brandy to which had been added 0·60 per cent. of fusel oil. He declared that, apart from the nauseous taste, nothing objectionable was experienced more than would have followed from drinking ordinary spirit. Now, from the experiments made on animals and men by Eulenberg, fusel oil is held to be injurious in its action, if not poisonous, and a person taking two fluid ounces of a whisky which Dr. Dupré's analysis showed to contain 0·19 fusel oil to every 100 of alcohol (the whisky itself containing 54·5 per cent. alcohol) would swallow close upon a grain of fusel oil, and if it contained three times the quantity, then three grains, which, having in view also the active properties of ordinary alcohol, is the lowest amount with which distinct effects like dyspnœa and depression were obtained. Accordingly some authorities consider the presence of one grain and a half of amylic alcohol or fusel oil in one fluid ounce of spirit as likely to be injurious to health. It is well known, further, that men engaged in the manufacture of potato spirit suffer from headache and general nervous indisposition, unless very efficient ventilation is provided. Fusel oil is essential, it would appear, in the formation of certain aromatic ethers which give to spirits their characteristic flavour and aroma, and, in spite of the many modes of accomplishing this change artificially in a short time, it would be exacting, surely, to expect results as good as those obtained when a spirit is allowed to mature by ageing. Meantime the additional evidence which is to be heard and the decision of the Select Committee will be awaited with interest.

REOPENING OF THE LIVERPOOL LOCK HOSPITAL.

THE Liverpool Lock Hospital, which, though a detached and separate building, is a part of the Royal Infirmary, was erected in 1833. Originally it was intended to hold seventy-two beds, all on the ground floor, but for many years past the accommodation was fifty beds, twenty-five for each sex. During the rebuilding of the new infirmary it was used as temporary medical wards, and some difficulty was experienced in its reopening for its original purpose. It was built to receive the patients formerly admitted into the lock wards of the infirmary, thus securing at the same time the enlargement of the infirmary proper, the more perfect separation of this class of patients, and their treatment by two surgeons appointed for the purpose. For upwards of fifty years it has done a very useful work, since, as may be judged, there must always be in a large seaport like Liverpool many cases necessitating treatment in such a hospital. We learn that the difficulty in the way of its reopening has been overcome, and that the hospital is to be reopened at an early date.

THE SOURCE OF ALBUMINURIA.

DR. W. H. PORTER, in a paper on the Source and Significance of Albumen in the Urine,[1] sums up as follows:—1. That the albumen found in the urine, excepting that which occurs in the early stages of an acute exudative or diffuse nephritis, is a derived albumen, and not serum albumen. 2. In the early stage of an acute exudative or diffuse nephritis the albumen comes directly from the blood-vessels, due to the inflammatory alteration in their walls, and is of the serum albumen type. 3. That later in acute exudative or diffuse nephritis, when the vascular walls have partially recovered from the primary inflammatory damage, the albumen becomes more abundant in quantity, but now it is of the derived albumen type, and has been

[1] The Post Graduate, Jan. 1891.

excreted by the damaged epithelial cells lining the uriniferous tubules. 4. That in all conditions, excepting the acute exudative or diffuse nephritis, where albumen is found in the urine, it is due to changes in the epithelium, by which it is unable to do the work properly and excrete, or allows a derived form of albumen to pass through into the urine. 5. That the quantity of albumen contained in the urine is always in direct proportion to the amount of retrograde change in the epithelial cells. 6. That this retrograde change in the epithelial cells is secondary to an impaired nutritive condition at large, together with an overworked state of the renal cells, without a compensatory nutrition being sustained. 7. Viewed in this light, if we direct our treatment to improving the general nutrition of the system, and at the same time decrease the amount of work to be accomplished by the kidneys, we shall see many cases of complete recovery which must otherwise remain cases of albuminuria.

BATHS IN CASUAL WARDS.

THE position of parish guardians with reference to the homeless poor is not without its peculiar difficulties. Charity, which is ever open to abuse, must especially in their case equally shun indulgence and hardness; and it would be remarkable if it did not err sometimes on one or other side. As regards the matter of baths in casual wards, which has lately created some discussion, it cannot be said that the fault of authority has favoured the bather. We read of several men in one bath at the same time with a natural feeling of doubt whether cleansing is, after all, the object of their immersion. If it is, then an ordinary bath is quite inadequate for the purpose. In so far it may succeed as to transfer the responsibility for dirt from one pair of shoulders to another, and with it the germ-carriers of disease, which form a part of its impurity. As for ablution the term is, under the circumstances, evidently out of place in a rational description. We may, therefore, without any abuse of charity, express a hope that more care may be taken in our workhouses to provide clean water for dirty inmates, and, if possible, even for separate individuals. The purpose to be attained is worth a reasonable expenditure of effort in the renewal of water, and might even justify, if needful, an additional bath or two, with cheap soap in sufficient quantity.

DECORATIVE PAPER ILLUMINATION.

THE growing tendency to make use of what we may call decorative paper illumination was again the cause of a somewhat serious fire in the Drill Hall, Cardiff, last Monday week. The occasion, it will be remembered, was that of a commemorative banquet given by Lord Bute. Floral paper and Chinese lanterns were freely distributed among gas and electric lights, and the immediate cause of much consequent damage was the contact of a stray lantern with one of the gas jets. But for the fact that the entertainment was of a kind which does not usually attract the company of ladies, we should probably have had to add the loss of human life to a serious amount of damage sustained by the hall itself and by a valuable collection of temporary furniture. Such an incident, occurring within a few weeks of the similar but aggravated disaster at Wortley, may well suggest a doubt in the most careless mind as to the propriety of thus freely using in close conjunction such obvious incompatibles as flame and tissue paper. This custom, however, is neither new nor unusual. In almost any house we may notice its prevalence, and every drawing-room and dinner table have witnessed its common result in petty fires created by some neglected candle or lamp shade. Happily, these are comparatively trivial, and have usually been early noticed and extinguished. At the same time they cannot fail to convey an uneasy impression that much worse consequences might follow if perchance a lighted shred were wafted towards some muslin dress or curtain. There are, of course, degrees of risk in proportion to the caution exercised in decorative arrangement, and we will not pretend that paper shades are inevitably and culpably dangerous. Their employment, however, must certainly weaken the guarantees of safety and increase the need of vigilance on the part of those who use them. As for the ordinary Chinese lantern, it scarcely needs the hard lesson of experience to show that its fittest place is out of doors. Even there perhaps it is not free from objection.

POSITION OF "OFFICIERS DE SANTÉ."

THE position of the French *officier de santé* must, we should imagine, be sometimes an unpleasant one, as his diploma does not give him the right to perform operations without the presence of a doctor of medicine, except in cases of great emergency where a doctor of medicine cannot be found. A case has recently occurred exemplifying this in the French courts of justice. A certain *officier de santé*, while attending a confinement, found that there was an arm presentation. Of course, he ought to have obtained the assistance of a practitioner of higher standing than his own, but instead of doing this he proceeded to pull upon the arm with such effect that the limb finally came off in his hand. Ultimately the services of a doctor of medicine were obtained. On his arrival he promptly turned and delivered, experiencing no difficulty in the operation. The next day the woman died, and the *officier* has been prosecuted for causing her death as well as for contravention of the law, which forbids *officiers* to perform operations and to practise outside the limits of the department for which their licence holds good. The result was that several fines were inflicted, and the offender was sentenced to three months' imprisonment for "homicide by imprudence." It is probable that the last has not yet been heard of this affair, as the prisoner has lodged an appeal to a higher court. It is, however, tolerably evident that the position of *officier de santé* is a most humiliating one, and that the present proposal to abolish that diploma has much to be said in its favour.

VACCINATION AND PROFESSIONAL COURTESY.

DR. EDMUND ROBINSON, the public vaccinator for Birmingham, sends us details of two cases which involve grave want of professional courtesy. A year ago he vaccinated a child, and not long afterwards he accidentally heard that an inquest was to be held on the child, because its death had been certified by another medical practitioner as due to syphilis from vaccination. The result was a verdict showing that the certificate had no foundation. Again, Dr. Robinson this month finds a report in a local paper as to a child whom he vaccinated some time back, and which, having been under the care of another medical practitioner, is alleged to have died of erysipelas associated with vaccination. The cause of death may, for all we know, be correct in this instance, and it is not this to which we desire to draw attention. But we feel very strongly that when a medical practitioner is called in to attend a child in connexion with its vaccination, which was performed by another practitioner, his obvious duty is to place himself at once in communication with his *confrère* who performed the operation; and it will be clear that no breach of ordinary professional courtesy such as is here indicated can possibly be justified because the case was one of vaccination, instead of any other operation, or because the medical practitioner who performed it happened to hold a public office. It may be some satisfaction to Dr. Robinson

to know that all such cases as he refers to are being inquired into by the Medical Department of the Local Government Board.

MR. GLADSTONE AND GROCERS' LICENCES.

IT is unsatisfactory to find, among the various devices for abating drunkenness, so little attention by our public men to the subject of grocers' and confectioners' licences. Unfortunately, Mr. Gladstone is so occupied with other Parliamentary matters that he has no time to undo, or consider the undoing, of a system of licensing which does very much indeed to favour secret drinking among women in the better classes of society. He has excused himself of late for this disastrous piece of legislation by saying that he was advised in its favour by distinguished philanthropists since deceased. This is a poor excuse. They are dead and incapable of retrieving or correcting a great error. He has the power, and with him lies the responsibility of doing so. The furtive possession of drink in households should be made, not easier, but as difficult as possible. This is a most binding duty at present resting on Mr. Gladstone.

THE FEVERS OF CHINA.

DR. COLTMAN, writing in the China medical missionary journal upon the fevers of China, remarks that but little personal investigation on the subject has been made up to the present time, owing to the comparatively recent advent of foreign medical men, and to the want of confidence on the part of the natives to submit for any lengthened period to the treatment of a foreign physician, or in fact to any one physician, their rule being to change doctors two or three times a day if they can afford it. Again, there have been but small hospital facilities for studying fevers, and there is an impossibility of obtaining post-mortem examinations. Dr. Coltman considers that small-pox is the most common disease, nearly every person suffering from it at some period of his or her life. Vaccination, although practised, is done very carelessly. Measles appears to be common, but is somewhat milder than in Europe. Scarlet fever, although it undoubtedly occurs amongst the natives, is far less common than amongst Europeans. Erysipelas is rare. Typhoid fever is very difficult to diagnose in the short time that a foreign medical man is allowed to attend a case; but Dr. Coltman thinks that when more accurate reports are possible, this disease will be found to be more common among the natives than is now supposed. Typhus fever is met with all over North China, and as far south as Shanghai. Relapsing fever is found constantly associated with typhus. Dengue does not seem to be known amongst natives. Cholera occurs as an epidemic every few years, and is very fatal. Diphtheria is severe and frequently fatal amongst the natives. Whooping-cough has occasionally been met with. Rheumatic fever is very prevalent in some parts. Chronic muscular rheumatism is common all over China, but is unattended by fever. Malarial fevers appear to be common everywhere, though the prevailing type varies; thus, tertian is most common in Pekin, quartan in Foochow, Swatow, Shanghai, and Hangchow, and remittent in Chefoo and Tientsin. In Chinanfu Dr. Coltman has never seen a case of quartan ague; it is all intermittent of the tertian or quotidian type. The treatment, of course, of all malarial fever is by quinine or some other cinchona bark alkaloid. In Hangchow the carbolic acid and iodine treatment has been used successfully as a prophylactic; arsenic is recognised as valuable in the chronic form.

FOREIGN UNIVERSITY INTELLIGENCE.

Kieff.—Dr. Heubel, Professor of Pharmacology, has been made Emeritus Professor.

Moscow.—Dr. Babukhin, Professor of Embryology and Comparative Anatomy, has been made Emeritus Professor.

St. Petersburg (*Medical Academy*).—Dr. Mendelsohn of Warsaw is to be appointed *docent* in Physiology.

Warsaw.—Dr. Dobroklonski of St. Petersburg has been appointed Extraordinary Professor of Special Pathology and Therapeutics.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. H. Cohen, of Hanover; Dr. Carl Goebel, *docent* in Odontology in the University of Cracow; Dr. Bengelsdorff, *privat-docent* in Medicine in the University of Greifswald.

THE annual meeting of the Obstetrical Society of London which was held on Feb. 4th was remarkable in several respects. Eighty-five persons were present, including eleven visitors. When the President, Dr. Galabin, began an obituary notice of the late Dr. Matthews Duncan, in the course of his annual address, the members present rose and remained standing till the speaker had concluded his observations on the life, work, and character of that eminent obstetrician.

VISCOUNT CRANBROOK, Lord President of the Council, has consented to receive a deputation of members of the medical profession at the Privy Council Office, Whitehall, to-day (Friday), at 3 P.M., with a view to hearing the expression of opinion which exists in the profession against the Midwives' Registration Bill. The deputation will be introduced by the Attorney-General for Ireland.

SIR JAMES SAWYER has signified to the Council of Queen's College, Birmingham, his desire to resign the office of Professor of Medicine at the College at the end of the present session. Sir James Sawyer has held the chair since 1885, having previously occupied the post of Professor of Pathology.

WE are requested to announce that the next meeting of the Medical Society of London, on Monday, Feb. 16th, will be a "clinical evening" for the demonstration of cases, and that the adjourned discussion on Angina Pectoris will take place at the following meeting on Feb. 23rd.

WE learn that our announcement of the resignation of Dr. Andrew of the post of Senior Physician to St. Bartholomew's Hospital, and consequently of the appointments dependent thereupon, was premature.

ON Wednesday, the 4th inst., Mr. Sydney Jones was elected consulting surgeon to St. Thomas's Hospital.

PROPOSED NEW HOSPITAL DISTRICT FOR NORTH LONDON.—The Local Government Board have, in pursuance of the powers vested in them under the Public Health Act, 1875, issued a provisional order for the formation of a joint hospital board for the districts of Edmonton, Enfield, South Hornsey, and Tottenham. This order, which will be subject to the approval of Parliament, and in opposition to which four petitioners have lodged petitions, provides that the joint board shall consist of four *ex-officio* and twelve elected members; the *ex-officio* members being the chairmen of the local boards of health for the districts named, and the elected members being representatives from the sanitary authorities of the same districts, the members assigned to each being—five to Tottenham, three to Enfield, and two each to Edmonton and South Hornsey. The purposes for which this united district is formed are stated in the order to be "the provision, maintenance, and management of a hospital or hospitals for the reception of cases of infectious diseases for the use of the inhabitants of the constituent districts."

THE LANCET
Analytical Sanitary Commission.

Results of the Microscopical and Chemical Analyses of the Solids and Fluids consumed by all classes of the public.

BISCUITS: THEIR MANUFACTURE.

IN resuming our Analytical Sanitary Commission on Food, and especially the more common forms consumed by the poorer classes, we may state that in the interval which has elapsed since the last report the laboratories have been entirely rebuilt and scientifically furnished with every requisite, both chemically and histologically, necessary for the elaborate investigations in which we are engaged. We shall continue the work now from month to month and as occasion may demand. We may mention, in order to give some idea of the labour and care which this department entails, that the results which appear in the following article on Biscuits are founded on eighty-four actual determinations successfully made by an expert staff, especially and wholly engaged upon this important department of THE LANCET. The subject of the analysis of food has not been neglected during the interim, as our results have been published in a briefer form every month in our "Analytical Records" column.

The manufacture of biscuits was at one time devoted exclusively to the preparation of the particular kind known as ship bread. Loaves of ordinary bread, by reason of the fermenting principle which they contain become sooner or later musty and unfit for food, and they are therefore ill adapted for use on board ship, while the preparation of bread at sea is found to be impracticable. The composition of ship bread is of the simplest kind. Flour is merely kneaded into a paste with water, cut into shape, docked, and then well baked in an oven of special construction. Free from ferment or leaven, the biscuits so prepared undergo very little alteration during the time occupied by a more or less extended voyage. The allowance of biscuit to each seaman in the Royal Navy is one pound per diem, which is equal to an average of six biscuits. The landsman can know very little of the real value of this kind of biscuit, but to the seaman it is the only form of bread which he has to rely upon, it may be, for months together.

Of recent years an enormous industry has developed in the United Kingdom in connexion with the manufacture of "fancy biscuits." Many firms are now exclusively engaged in this increasingly important branch, which in former times was almost entirely managed on a necessarily small scale by the pastry-cook and confectioner. Some idea of the extent of the manufacture of fancy biscuits may be gathered when the almost innumerable varieties which are made are considered. In the list of Messrs. Drew and Son, for example, which is before us, we observe the names of no less than 144 different kinds.

The introduction of machinery has done more to revolutionise the biscuit than the bread-baking trade. There are still many bakers who make their bread in a most primitive and unscientific manner. The ovens these men employ are of the simplest construction, and, so far as the consumption of fuel is concerned, about as wasteful as the coal or wood merchant could well desire. The dough is mixed by hand when it is not trodden down with the feet; the Scotch bakers very much prefer bread made by dancing on the dough. Formerly biscuits were also made by hand. This explained the irregular qualities of such biscuits, some being excellent, the others quite the reverse. Of recent years a certain number of large bread-making factories have sprung into existence where machinery is extensively used, but the whole of the biscuit trade is now dependent on machinery. With a few rare exceptions, biscuits made by hand could never find a market against the machine-made biscuit. This is, from the public health point of view, an important and beneficial change. Machinery reduces the danger of contamination to a minimum, and ensures greater cleanliness and uniformity in the quality of the article produced. Also machinery requires space, and could not be placed in the close, dark, unventilated cellars and other unhealthy places where biscuits used formerly to be manufactured. Thus the machine-made biscuit is a much safer article of diet than the old-fashioned biscuits that were mixed and shaped by hand. Of this our Commissioners were able to convince themselves by a visit to the works of Messrs. Drew and Son at Shadwell. Here an enormous hbusiness is done, especially in supplying hotels, public-houses, and ships with biscuits that are eaten for hunger rather than as a sort of pastime. We therefore determined to ascertain whether the process of biscuit-making at Messrs. Drew's factory was free from any danger of contamination. An examination of the process from the commencement to the end convinced our Commissioners of the great superiority over that adopted in an ordinary bakery where the quartern loaf is produced. As in the large bread factories, the ingredients—flour, lard, butter, eggs, and milk—are all brought to the upper floor of the factory. Here they are mixed, and by hoppers descend into the kneading machines, which are on a lower floor. These machines replace the obnoxious hand labour about which so much has been said. In large metallic drums arms, like the propellers of a screw ship, beat and stir the flour and the other ingredients till the dough is thoroughly mixed. Then the door of the drum being opened, the beaters in turning throw the dough out on to a tray, so that it need not be touched by hand, and can be conveyed to the next machine on the tray. This second machine replaces the housewife's familiar rolling-pin. It is not unlike a mangling machine. The paste or dough passes backwards and forwards between rollers till a smooth even sheet of paste is produced. Now this has to be transferred to a third machine, the cutting and panning machine which cuts up the paste into the size and shape of the biscuits, and stamps upon it the name of the firm or some suitable design. The biscuit now only requires to be baked, and as the amount of baking necessary changes according to the size and nature of the biscuit, no less than six different and very large ovens are employed for this purpose. The trays on which the paste, cut into the shape of biscuits, is placed travel through the ovens at a rate varying from five to twenty-five minutes. The heat registered in this journey through the oven amounts to 400° F. By machinery the whole works automatically. The biscuits are not touched till they reach the sorting and packing rooms. Here some thirty to forty young women are actively at work neatly placing the biscuits in boxes or tins. This packing room is lofty, with pointed roof, and a good light streaming in from all sides. The lavatories were very clean and well arranged at the time of our inspection.

The closets used by the men are well walled off from the bakery and amply ventilated on to the stable yard; also the bakery is abundantly supplied with fresh air. Some of the loftier parts are not walled in, so that the open sky is visible and the overheated air can always escape. Also there is a Blackman's air propeller, used to cool the biscuits in summer time, but which likewise serves to stimulate the general ventilation of the establishment. Altogether, it may be said that the biscuits are made under very wholesome conditions, and the workers engaged at this factory have a plentiful supply of air and light. The water, it should also be noted, is taken direct from the main, and is not stored in tanks, an advantage that all sanitarians will not fail to appreciate. Some of the paste used is in an almost liquid condition, it has at most the consistence of treacle. Even when in this condition it is dealt with by machinery. A receiver is perforated on the lower side with round holes. Pressure from above upon the receiver forces the paste through these holes, from which it flows in a thick cord-like stream. As it comes through, a knife or divider glides down the side of the receiver with the regularity of a clock pendulum. With equal regularity there pass underneath little tin pans, just in the very nick of time to receive each piece of paste as it oozes out from the receiver, and is cut by the blade. The little tins now loaded travel onwards to the oven, some perhaps receiving on the road a few currants, which form a little black cap for the forthcoming cake. All this works smoothly, automatically, and with marvellous precision. The good things that are thus made need not be touched, they have only to be watched. Altogether, the process demonstrated how much machinery can help to render the manufacture of food both economical and cleanly, for, needless to say, the machine did in a few moments

what it would take a good baker or cook, working with his hands, many hours to accomplish. The rapidity of the process is in itself an important guarantee. The quicker the work is done, especially when the paste is in a moist condition, the smaller becomes the risk of any accidental contamination.

The ingredients of fancy biscuits differ from those used in the preparation of the plain ship biscuit only in that to the flour and water are added butter, milk, eggs, and various "flavourings," such as ginger, caraway, lemon, orange water, cinnamon, &c.; and, though they are characterised by differences in form, appearance, and taste, the greater number are practically made with the same materials. The variation in the composition, either as the result of a modified step in the process of cooking or in the addition of other substances, is fairly indicated in the following table of analyses which we have made of twelve varieties of biscuits manufactured by Messrs. Drew and Son Analyses of a sample of bread and flour have been appended, so that any important change brought about in the composition by the different methods of preparation may be recognised at a glance. The numbers represent parts per cent.

Albert.—The greatest amount of fat is, according to these analyses, contained in the Albert biscuit, whilst the nitrogenous matter is, with the exception of the ginger nut, lowest.

Arrowroot.—This biscuit is seen to contain a lower amount of starch, and the soluble dextrin and sugar are proportionally increased. The fat approaches the common average.

Bovril.—The chief point to be noticed in regard to the bovril biscuit is the high amount of nitrogenous substance (12·10 per cent.). This, like the name, implies the presence of meat extract. The mineral matter is high from the fact of its containing more phosphate, while the proportion of sugar is comparatively low.

Cornflour contains a large amount of cold water extractives, dextrin and sugar. The fat is less than the average. Microscopical examination confirms the presence of cornflour.

Cracknel.—This excellent biscuit shows a marked difference in composition. The amount of albuminoids, for instance, is highest, being as much as 14·24 per cent. This may be accounted for by the probable use of a larger quantity of milk in its preparation. The ash is proportionally higher from the increased quantity of phosphate, and the moisture is well above the average—a point curious to note, as the cracknel is commonly credited as a biscuit which is more than ordinarily dry to the taste, and the biscuit under examination was no exception to this rule. The microscope showed considerable distortion of the starch granules, and the dextrin is particularly high.

Digestive.—Microscopical examination showed the presence of a goodly proportion of husk, and on this fact claim to the title "digestive" is probably made. The nitrogenous matter, it follows, is therefore high, and the amount of mineral matter proportionately increased. This biscuit, in particular, testifies to the general excellence of the manufacture.

Ginger nut.—The analysis of this popular biscuit corroborates the idea of the composition which is suggested by the taste. Thus it contains the highest proportion of sugar (44·50 per cent.). The ash is accordingly increased, whilst the albuminoids and starch are diminished.

Marie.—The high proportion of dextrin in this biscuit is worthy of remark.

Milk.—Milk biscuit contains a larger proportion of starch, and the sugar and dextrin are low.

Osborne.—Like "Marie," this biscuit gives figures which may be regarded as average results.

Water.—From the fact that the amount of fat and sugar in this biscuit approximates to that contained in flour, it most probably consists of the simple materials which are used in the preparation of ship bread.

The Analyses of Various Kinds of Biscuits, showing the chief Variations in their Composition.

Designation.	Starch.	Cold water extractives.		Albuminoids, N × 6·33.	Fat.	Mineral matter.	Moisture.
		Dextrin.	Sugar.				
1. Abernethy	68·06	3·10	9·70	10·50	5·50	1·20	2·34
2. Albert	64·80	3·35	18·25	8·20	7·00	0·84	2·56
3. Arrowroot	62·11	2·30	14·20	8·90	6·00	0·85	5·64
4. Bovril	60·95	2·72	2·78	12·10	6·50	1·15	4·80
5. Cornflour	61·75	3·50	16·20	9·43	4·50	0·76	3·86
6. Cracknel	55·84	12·00	2·80	14·24	4·00	0·92	10·20
7. Digestive	61·87	5·10	11·40	11·57	5·00	1·04	3·12
8. Ginger nut	38·04	1·71	42·79	6·01	4·20	1·64	4·12
9. Marie	63·72	10·00	10·40	8·72	5·00	0·74	2·12
10. Milk	73·00	2·80	3·00	9·44	6·10	0·72	4·04
11. Osborne	63·28	2·00	16·20	10·32	5·20	0·96	2·04
12. Water	76·03	3·60	2·70	11·39	1·00	1·26	4·02
Wheat flour	69·00	2·75	0·71	12·90	1·22	0·73	12·69
New bread	45·30 (with dextrin)	—		3·98	7·76	0·12	0·81	42·03
,, ,, dried	78·12	—		6·87	13·39	0·22	1·40	—

The difference between the composition of a biscuit and that of flour consists in the greater quantity of sugar and fat in the former article and the important formation in it of soluble dextrin, and not improbably sugar from the heating of the flour. The granules of starch, as indicated by the microscope are, moreover, set free from their cellulose envelope, and some of it is then no doubt rendered soluble by the same physical agency. The albuminoids of flour are albumen, gluten, mucin, fibrin, and the important substance cerealin, which corresponds in its action upon starch to the diastase of malt. In bread, and also in biscuits, the albumen and gluten are coagulated, and their solubility is consequently greatly diminished, although their value as flesh-forming substances does not appear on this account to be affected. New bread in its composition differs from biscuit chiefly in the large amount of moisture it contains, and of course in the fat and sugar, which in the biscuit are for the most part added ingredients. The mineral matter, with one or two exceptions, where common salt is present in small quantity, consists almost entirely of soluble phosphate, to which is assigned bone-forming value. Good biscuits are known by a delicate crispness, a fresh wheaten smell on fracture, a good flavour, and an absence of excess of moisture. The biscuits examined were in all these respects satisfactory—results which can only be attained when the finest flour is employed in their manufacture. This was further borne out by microscopical and chemical examination. It may be remarked that, although "fancy biscuits" do not enter largely into ordinary diet, yet for many purposes they afford a convenient and valuable form of food, containing, as appears from these analyses, all the elements necessary for the nutrition of the body. The points of interest attaching to each kind of biscuit may, in fine, be briefly indicated below.

Abernethy.—This biscuit is characterised mainly by the presence of caraway seeds, and probably on this account the mineral matter is comparatively high. Fat, most likely in the form of butter, has of course been added, flour containing not more than 1·22 per cent.

THE LIBRARY OF THE ROYAL COLLEGE OF SURGEONS.—The library of the Royal College of Surgeons will be closed on Friday, Saturday, and Monday, the 13th, 14th, and 16th of this month. Should a reader, however, desire to work there on any or all of those days, he can do so by furnishing the librarian, before the 13th, with the names of the books which he wishes to see.

Pharmacology and Therapeutics.

FERRIC BROMIDE.

DR. HECQUET, formerly physician to the Abbeville Hospital, very strongly recommends the perbromide of iron or ferric bromide in many affections in which it is desirable to soothe without depressing and to strengthen without exciting. Out of twenty-five cases of spermatorrhœa treated by this drug nineteen were completely cured, two only being unrelieved, and in these cases complications were present in the form of prostatic enlargement and stricture of long standing. The perbromide was frequently found useful in cases of chloro-anæmia, leucorrhœa, hysteria, amenorrhœa, hydræmia of pregnancy, chorea, epilepsy, diabetes, and tuberculosis. In conjunction with Dr. Vacossin a series of trials were made in the Abbeville Hospital on its action in cases of cardiac hypertrophy, with the result that Magendie's observations, made more than fifty years ago, were confirmed, the patients being strengthened and relieved by the calming of the palpitation and of the dyspnœa. This combination is well borne, even by irritable stomachs. It may be taken in solution, or in lozenges, the dose being from three to five grains. The action is more rapid than that of most iron compounds, as its good effects begin to manifest themselves in cases of chlorosis during the first week of administration, a complete cure being generally obtained in a month. Dr. Hecquet has found by experience that the ferric salt Fe_2Br_6 acts both more rapidly and gives more permanent results than the ferrous salt $FeBr_2$, and hence he has latterly confined himself to prescribing the former, which he does not hesitate to say is endowed with exceptionally valuable properties, and deserves to be far better known and more employed than it has hitherto been. There is a preparation of the ferrous salt in the Pharmacopœia of the British Pharmaceutical Conference, which, however, is not very largely prescribed. No preparation of the ferric salt seems to be known in this country.

CHLORAL AS A COAGULANT.

Though hydrate of chloral is generally used in medicine it is not without its advantages in surgery. According to Dr. Marc Sée it possess the property of coagulating blood and serous fluids, and may be made to replace the iodine solution generally injected into hydroceles. He himself has treated 200 hydroceles with chloral without the occurrence of any accident. He employs for this purpose a 10 per cent. solution, an ounce of which is injected all at once, or very slowly, into the sac. Two or three days afterwards a large effusion of fluid into the tunica takes place, but is soon entirely reabsorbed. Where the hydrocele wall is much thickened injections of chloral, or, indeed, of any kind, are useless, and recourse must be had to free incision. The chloral solution above referred to may be repeatedly injected, with advantage, into the neighbourhood of varicose veins, as it causes the blood gradually to coagulate, and the veins to contract. Some trials have also been made with chloral as an injection into vascular tumours, but hardly sufficient to warrant any definite report.

HYPNAL.

This new hypnotic—a compound of chloral hydrate and antipyrin—introduced in France by Blainville, has had considerable trial on the Continent, and the opinion of those who have used it is that it is an efficient sedative, that it is less depressing and more soporific than chloral, and that it has the advantage over both chloral and antipyrin of being tasteless. In the *New York Medical Record* Dr. Mattison relates his experience of the drug in sixteen cases. The patients had all been the subjects of the opium habit in some form. Ten out of the sixteen cases were successfully treated by it—i.e., each patient after his dose obtained from four to six hours' sleep; in two the success was partial, sleep being limited or delayed, while in four it completely failed to produce sleep, and in some gave rise to increased restlessness. It was given in doses of from fifteen to sixty minims by the mouth, double that quantity by the bowel, while fifteen minims were the hypodermic dose. In administering by the mouth it is advisable to give it with twice the quantity of alcohol, while it can be given pure by hypodermic injection. No inconvenience was found to attend its administration. It had apparently no effect on the heart or lungs, and it never produced relief from pain without sleep. As has been remarked in some cases in which it was unsuccessfully tried, it gave rise to an increased restlessness, which, however, was easily combated by chloralamide.

IODIDE OF IRON IN LEAD POISONING.

It is stated by M. Lavrand in a Lille medical journal that he has found iodide of iron in the form of pills, as prescribed in the French Codex, very efficacious in treating the lead poisoning which occurs amongst workmen employed in white-lead manufactories. Sometimes he gives the iodide of iron by itself, at others he combines with it phosphide of zinc. Under this treatment workmen who had already commenced to show signs of lead poisoning were enabled to continue their occupation; their general health also improved, and the amount of hæmoglobin increased.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

THIS Congress, which is to meet in London in August next, is assuming proportions commensurate with the importance of the subject and the great city in which it is to be held.

The organisation of the Sections is now almost completed, and the list of presidents and secretaries which has been issued is calculated to enhance the success of the Congress.

Over the important section of Preventive Medicine Sir Joseph Fayrer will preside, and doubtless his wide experience in India and at home and his known ability as a linguist will tend to give this section a wide and practical basis. Dr. Seaton, Dr. Isambard Owen, and Dr. Sidney Martin will act as secretaries to this Section.

When we say that Sir Joseph Lister is President of the Section of Bacteriology, and that he has for secretaries men of such tried ability as Dr. Armand Ruffer, Dr. William Hunter, and Mr. Sherrington, the profession may feel assured that this important subject will meet with full justice.

The Diseases of Animals in relation to those of Man is the subject to which Section 3 is devoted. Sir Nigel Kingscote, one of the staunchest supporters of the Royal Agricultural Society, is to act as president, and Professor Brown and Dr. Klein have been nominated vice-presidents; while Dr. Sims Woodhead, Mr. Duguid, and Mr. Ernest Clarke, the secretary of the Royal Agricultural Society, will serve as secretaries.

The section devoted to Infancy and Childhood will be presided over by the Chairman of the London School Board, Mr. J. R. Diggle; while the secretaries are Dr. Warner, Dr. Pasteur, Dr. Wethered, and Mr. T. A. Spalding.

Naval and Military Hygiene, a subject of prime importance, will be presided over by Lord Wantage, a nobleman whose experience with the regular army, the volunteers, and the St. John Ambulance Society, coupled with his well-known philanthropic tendencies, gives him a singular claim to such a position. The Directors-General of the Medical Department of the Army and the Navy, Sir Lothian Nicholson, Surgeon-General Marston, and Professor Notter will act as vice-presidents. There are four secretaries to this Section — Fleet-Surgeon Macdonnel for the Navy, Brigade-Surgeon Hector for the Army, Dr. Collingridge, the medical officer of health for the Port of London, to represent the mercantile navy, and Mr. John Furley, to represent the interests of ambulance work.

Lord Basing, a past President of the Local Government Board, will preside over the Section of State Hygiene, and associated with him are Sir Albert Rollit and Dr. Thorne Thorne, with Mr. Lithiby, of the Local Government Board, Dr. Louis Parkes, and Dr. Whitelegge as secretaries.

The Section of Chemistry and Physics in relation to Hygiene has for its President Sir H. Roscoe, M.P.; that of Architecture is presided over by Sir Arthur Blomfield; and that of Engineering by Sir John Coode, the President of the Institute of Civil Engineers.

With such an organisation we cannot but regard the success of the Congress as assured.

At the last meeting of the organising committee Dr. G. V. Poore was nominated for the office of honorary secretary-general, while Professor Corfield was appointed honorary secretary for foreign correspondence. This is as it

should be, for it is evident that a divided responsibility in the organisation of a great gathering is impossible.

The Reception Committee, which is presided over by Sir Spencer Wells, is making way with its arrangements for the hospitable entertainment of the foreign and provincial guests. The City have promised a reception at the Guildhall, the medical officers of health are, we believe, meditating a conversazione at South Kensington, the Zoological Society have agreed to make members of the Congress free of their gardens during the week of session, and Sir Spencer Wells has, with his usual hospitality, offered to receive the members at Hampstead on one of the afternoons. This is a very promising beginning.

PROPOSED NEW GENERAL HOSPITAL IN BIRMINGHAM.

A PUBLIC meeting at which most of the leading citizens of Birmingham were present was held in the Town Hall on the 29th ult., to consider the site in St. Mary's-square selected by the committee of the General Hospital for the building of a new institution which is to replace the old hospital in Summer-lane, now admittedly inadequate to the requirements of the city, and unsuitable from a sanitary point of view. The meeting was largely attended, and the chair was taken by the Mayor (Alderman Clayton). They had met, he said, to promote a noble object—the rebuilding of their old and much-loved General Hospital. He referred to the labours during fourteen years of Dr. John Ash to erect a hospital for the sick and lame, and how, in 1779, it was opened with only fourteen beds. From this small beginning it had grown until it possessed 275 beds. In reference to the new hospital, he believed the feeling in the town was this, that when the hospital was begun to be built it should be the best that money could produce, and that £5000, £10,000, £15,000, or £20,000 would if necessary be forthcoming to produce that result. The Mayor pointed out that already nearly a million and a half patients had gone through that hospital during the century and a quarter of its existence. He was sure, now that this scheme was before them, Birmingham would rise to the requirements of what was asked.

The Right Hon. Joseph Chamberlain then moved: "That the present hospital is inadequate to the requirements of the city on account of its sanitary arrangements, site, and surroundings; and that it is therefore desirable to rebuild the hospital on the site in St. Mary's-square approved of by the governors." He asked Birmingham to find in the shape of voluntary contributions a sum very little less than £100,000. The town during the last thirty years had grown in wealth and population and in public spirit, and a sense of the duty of public munificence, of which their ancestors had no conception. A great sum had been subscribed, but up to the present time the list of subscribers numbered only 320, out of a population of 450,000. Up to the present no general appeal had been made, and he was quite sure that the masses of the people would desire, when the proper time came, to contribute their mite, although they might not have cared to put it before the public when larger subscriptions were being announced. The General Hospital has waited for its turn of renovation. He thought it had waited too long. Now at last they had undertaken this task, let them make amends for the delay by the perfection and the thoroughness and the completeness of the work which they were about to accomplish.

Dr. Wade, in seconding the resolution, pointed out the prominent defects of the present hospital. There was no ward for the seclusion of noisy patients, and in a ward where there were twenty beds it was a very serious drawback to have a patient crying or moaning night and day. The ordinary sanitary arrangements of the hospital were defective, there was no ward for children, and there was want of sufficient air space for the number of beds which the hospital contained. The arrangements for the surgical department were also inadequate. It was important that the hospital should be arranged for medical study, because that had a bearing not only on the present patients, but on the well-being of patients in future years. The accommodation for officers was insufficient, and that for the servants was worse. Deficiencies of that kind could only be remedied by rebuilding the hospital. On the new site the hospital would have a lung in the shape of three acres and a half of open space in St. Mary's-square, an advantage that would more than outweigh many drawbacks. It was close to Corporation-street, the great artery of the town, and from every point of view it seemed the position in which to rebuild the General Hospital.

Mr. Oliver Pemberton, in supporting the resolution, maintained that the present building was absolutely incapable of further alteration with advantage. During the last forty years the governors must have expended something like £50,000 in their endeavours to keep pace with the demands of the age. The site proposed for the new hospital seemed, in his judgment, to answer all the requirements as to space and freedom from disagreeable surroundings. Some true friends of the charity had pictured to themselves rebuilding in the suburbs, but they had no right to take the hospital from the midst of the very people who required its daily and convenient use. On a well-drained gravelly site, with the applications of science, to ensure the health and comfort of the patients, it was possible to carry on to its highest perfection a hospital in the midst of the population who use it, equally as well as if it were placed on the downs of Brighton. Mr. Pemberton next quoted from a speech by Sir James Paget,[1] in which it was urged that a great hospital should be in connexion with a medical school in order best to fulfil its objects. "Nowhere is that union of service and charity more perfect, and nowhere does it bear better fruit than in the combination of a thoroughly scientific medical school with a thoroughly charitable hospital." He concluded: "Long as I have served, I trust it may be my good fortune to serve yet a little longer—though the senior member of your staff—to aid in the accomplishment of this great undertaking. And now let me express a hope that the 'New General Hospital' that is to be shall create the same amount of confidence, excite the same amount of gratitude in the hearts of this great community, that the old one has created and excited in its time and season; and that the committee of management and the medical staff shall be honoured and trusted in their future records as they have ever been in the past history of their responsible and beneficent undertakings."

Mr. J. C. Holder read a list of donations amounting to £75,000. Of this the Birmingham wholesale brewers had subscribed £15,000. He excused himself from occupying the audience with the whole of the list, but it was speedily discovered that with apparently undue modesty he had omitted to read the addendum of the brewers' donations, in which he himself headed the list with a donation of £5000. In obedience to the command of the Mayor, Mr. Holder completed his task amidst general plaudits.

Dr. R. W. Dale moved: "That the working classes of Birmingham and the neighbourhood be requested to assist the undertaking in such manner as may seem to them most desirable." He said, time was when it was imagined that the duty of supporting great charitable institutions rested exclusively upon the more prosperous classes. The working classes were to receive the benefits of the institutions; the richer people were to find the money for maintaining them. Thirty or forty years ago, had such a project as the present been before the town of Birmingham, the Committee of the General Hospital would never have dreamt of putting the resolution now moved into the programme of such a meeting; anyone who had predicted that the working people of the city would raise £10,000 a year for the support of the medical charities would have been regarded as indulging in the wildest of prophecies. The commencement of the change was evident when the new wing was added to the Queen's Hospital; the continued success of the Hospital Saturday movement indicated how far the change had extended. The great masses of the working people had practically come forward and said, "We have political power; on us in part depends the fate of Ministries; our voice is potent for peace or war; we have our share in the control of the destinies of this great empire; we, too, are citizens, with duties and responsibilities, and we are prepared to discharge those duties."

Councillor Ball seconded the resolution, and urged the working men to do their utmost to help the work. The resolution was carried with enthusiasm.

The Right Hon. Lord Leigh moved: "That the General Committee of the hospital, the Orchestral Committee, and the visitors of the hospital, be appointed a committee to

[1] THE LANCET, vol. ii. 1890, p. 705.

carry out the objects of this meeting, with power to add to their number, and that Mr. J. Jaffray be requested to accept the office of honorary treasurer, and Mr. Walter N. Fisher that of honorary secretary," which was seconded by Sir Thomas Martineau, and carried.

The Rev. Canon Wilkinson moved a vote of thanks to the Mayor for presiding, and expressed his deep joy that the response to the appeal had been so generous. This was carried, and the meeting terminated.

THE DEBATE ON KOCH'S REMEDY AT THE BERLIN MEDICAL SOCIETY.

THE subject of Koch's remedy still continues to be discussed at the Berlin Medical Society every week, the proceedings on Feb. 7th[1] being as follows:—

Professor VIRCHOW exhibited the lungs from a case treated at the Augusta Hospital with twelve injections from Dec. 4th to Jan. 12th. In each lung, especially the left, were circumscribed areas of dense pigmented carnification, intersected by whitish bands of "dissecting pneumonia" or spaces filled with pus and caseous material. But there was no true caseous hepatisation. Another specimen, from a patient who had received thirty injections, illustrated the passage into gangrene of acute "smooth" hepatisation. There were large apical cavities, and recent as well as old pleurisy, whilst the lower lobes showed areas of recent catarrhal pneumonia already breaking down. There were numerous healing ulcers in the colon. A third case was one of phthisis complicated with syphilis and amyloid disease; only two injections had been given. The phthisis was acute, and there was extensive cicatrisation of laryngeal ulceration. Lastly, he exhibited specimens from a case of hip disease in a child, aged three years and three-quarters. The head of the femur had been recently excised, and prior to that the child had had five injections. Death occurred from acute miliary tuberculosis, tubercles being well seen in the bone marrow. They also occurred in the lung, and the rare (in child) complication of arytenoid perichondritis was present. Professor Virchow deprecated very strongly the statement that in many cases (especially the fatal ones) the injections had been made on experimental grounds and with no therapeutic aim.

Dr. P. GUTTMANN showed a case of inoculated tubercle on the ring finger, in which the diagnostic reaction of Koch's fluid had been confirmed by microscopical examination of excised portions. The "warts" were attributed to inoculation of an abraded surface from a corpse which the man (a hospital porter) was engaged in carrying. Under the treatment they much diminished.

Dr. GRABOWER had no doubt as to the supervention of fresh miliary nodules in laryngeal cases under treatment, but he did not think this serious; it rather showed that the treatment should be continued. In two cases, which he exhibited, such nodules appeared without any pre-existing disease of the larynx. He gave the details of these cases, both early pulmonary phthisis with bacillary expectoration. In the one laryngeal symptoms arose after the twenty-fourth injection, and examination showed swelling of the false cords and a profuse eruption of grey miliary tubercle. These nodules soon became confluent, but entirely disappeared during the continuance of the injections. The other case was very similar, except that the nodules had not been yet wholly removed. He had often noticed this rapid subsidence of laryngeal tubercle after a few injections, and without denying the possibility of infection by contiguity, he regarded their appearance as a direct indication for persevering with the treatment.

Dr. JOLLY, who resumed the debate on Professor B. Fraenkel's paper, directed attention specially to the mental disturbance excited by the fever caused by the injections in some cases, analogous to other febrile "psychoses." He mentioned two cases in Professor Leyden's wards, one a man who had pleurisy with effusion, and who had become depressed mentally by his long illness. The injections (2 to 7·5 mgr.) produced very notable febrile reaction (38·3° to 40°), during which he always became dull and confused. After five injections they were discontinued, and two days later he began to have delusions and was transferred to the insane ward, where his delirium continued to increase. However, these mental symptoms disappeared in a fortnight; they were compared by Dr. Jolly to the delirium of defervescence or post-febrile delirium, not infrequently seen. The man was predisposed by his former depression, and by the excitement attending the hopes of cure by the new remedy. The other patient was in an early stage of phthisis but very wasted, and much enfeebled mentally as well as physically. Although very little fever followed the injections there was severe headache on each occasion, so that after four had been given they were remitted for a time. Then they were again used, and he received fifteen more, always suffering severely from pains in the head. He also lost weight. He then lapsed into a state of melancholia with marked delusions. Mention was also made of a hysterical subject who became markedly delirious after each of three injections she received; she had been very delirious previously during the hectic fever of the phthisis from which she suffered. Although such symptoms might arise only in a minority and were seldom permanent, yet occasionally (in predisposed subjects) they initiated an incurable disorder. Hence the need to proceed very carefully with injections in such subjects.

Dr. HENOCH spoke unfavourably of the treatment in pulmonary tuberculosis of children, of whom he had treated twenty by this method. Three of these were in the "advanced" stage, but without fever; they were all made much worse, the fever induced by the injections persisting as hectic. Yet only ½ mgr. (at first he only gave $\frac{1}{10}$ mgr.) was given at the commencement of treatment, and the largest dose was 3 mgr. In one case there was temporary improvement, dulness disappearing, only, however, to return with increase of other signs on continuance of the injections. Another case illustrated Professor Virchow's statements. A girl eleven years old, whose mother had recently died from phthisis, had suffered from a cough for a year; but there were hardly any physical signs, except slight dulness near spine of scapula, prolonged expiration, and some rhonchus at apices. An injection of ½ mgr. gave no reaction. One of 1 mgr. produced next day a rise of temperature to 38·6°, and some râles appeared at the left base. Five injections in all were given, and a few days after the last, signs of extensive consolidation of the left lung appeared; and even after a month's interval they had very slightly decreased. Obviously it was not a mere transitory hyperæmia, but whether caseous or catarrhal hepatisation could not be determined. There was some suspicion of commencing excavation, for the breathing, which was intensely bronchial, had an occasional amphoric tone, and the râles were metallic. Professor Henoch attributed this change without a doubt to the injections. He said not one of his cases had been "cured," not one "improved" except the one which subsequently relapsed to a worse state; and he was embarrassed to decide if he should continue the treatment in children any longer. It would be ludicrous in the case of a child to follow the practice of some physicians who do not use the injections except at the patient's own wish. Bearing in mind the tendency for tubercle in children to be dispersed in many foci throughout the body, he felt one would be justified in only using it with the greatest reserve, and perhaps at no distant date in discontinuing the practice altogether.

[1] See Berliner Klin. Wochenschr., No. 6.

NOTE ON

ALDEPALMITIC ACID, THE RECENTLY DISCOVERED CHIEF COMPONENT OF THE BUTTER OF THE COW.

BY J. ALFRED WANKLYN,

CORRESPONDING MEMBER OF THE ROYAL BAVARIAN ACADEMY OF SCIENCES.

IT has long been known that the acids arising from the saponification of butter include small proportions of butyric, caproic, caprylic, and rutic acids. The larger proportion of the acids has, up to the present time, been held to consist of palmitic, oleic, and stearic acids, which are non-volatile and insoluble in water. In the course of investigations with which I have been engaged for a number of years I have arrived at the very unexpected result that the main acid is not palmitic acid, but an acid quite distinct from palmitic acid, both in composition and properties. On the 19th ult. I had the honour of reading a paper on the

subject before the Society of Chemical Industry, and in due time the details will doubtless be published. In the meantime it may be of interest to mention that the new acid, which is so abundant as to amount to about half of the weight of the dry butter, differs from palmitic acid by containing less hydrogen, and that its formula is $(C_{16}H_{30}O_2)n$. The melting point of the new acid is about 50° C., whereas palmitic acid melts at 62° C. The new acid possesses the extraordinary property of consolidating or gelatinising alcohol. At temperatures below 5° C. it gelatinises more than five times its weight of alcohol. Part of the alcohol is held mechanically by a sponge-like action, and part is retained in chemical combination. Palmitic acid (as I have ascertained by experiment) possesses no such property; indeed, so far as I know, no other substance resembles my new acid in this particular.

MEDICAL TRIAL.

CHARGE OF BREACH OF THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

AT the Bolton County Police-court, on Monday, a case of interest to the medical profession was heard, Dr. Gilchrist, a local practitioner, being summoned at the instance of the Bolton Rural Sanitary Authority for an alleged breach of the provisions of the Infectious Diseases Notification Act, 1889. The case for the prosecution was in effect that the defendant failed to notify a case of typhoid fever in a young girl until after a knowledge that she had so suffered for about a fortnight, and evidence to this effect was given by the mother of the child and Mr. Barr, the medical officer of health for the local authority. The latter stated that when he received the notification from Dr. Gilchrist he visited the house, and found the child in a convalescent state, this being borne out by the testing of the temperature and the pulsation, both of which he found to be normal. Mr. J. M. Rutter, for the defence, submitted that Dr. Gilchrist had always shown himself willing to assist the local authority, and conformed with the requirements of the Act as soon as he had accurately diagnosed the case. Further, he said that typhoid fever might go on for even six weeks without a medical man being able to certify, and he called evidence in support of that statement. Mr. Wm. Court, L.F.P.S.G., said it might be possible to diagnose a case of enteric fever in four days, or it might never be ascertained at all. He had attended patients for four weeks before he was able to tell whether it was a case of enteric fever. Dr. Panton stated that cases of typhoid fever were exceedingly difficult to diagnose. In many cases three or four weeks elapsed before they could form an opinion on which they could certify. It was much more difficult in the case of children than grown-up persons. The Bench were satisfied without further evidence, and dismissed the case.

A similar case was withdrawn, but the clerk to the Rural Sanitary Authority later on gave notice of appeal.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6608 births and 3803 deaths were registered during the week ending Feb. 7th. The annual rate of mortality in these towns, which had declined from 28·7 to 22·3 per 1000 in the preceding five weeks, further fell last week to 19·8. The rate was 19·1 in London and 20·4 in the twenty-seven provincial towns. During the past five weeks of the current quarter the death-rate in the twenty-eight towns averaged 24·5 per 1000, and exceeded by 1·9 the mean rate in the corresponding periods of the ten years 1881-90. The lowest rates in these towns last week were 12·6 in Derby, 13·5 in Leicester, 14·7 in Hull, and 16·5 in Salford; the highest rates were 24·5 in Portsmouth, 26·9 in Blackburn, 30·2 in Plymouth, and 37·8 in Preston. The deaths referred to the principal zymotic diseases, which had been 404 and 379 in the preceding two weeks, further declined last week to 332; they included 84 from whooping-cough, 80 from measles, 58 from scarlet fever, 43 from diphtheria, 37 from diarrhœa, 30 from "fever" (principally enteric), and not one from small-pox. No deaths from any of these zymotic diseases were recorded in Derby, Hull, or Cardiff, while they caused the highest rates in Oldham, Blackburn, Preston, and Halifax. The greatest mortality from measles occurred in Bristol, Oldham, Preston, Halifax, and Blackburn; from scarlet fever in Bradford and Plymouth; and from whooping-cough in Salford, Huddersfield, and Halifax. The mortality from "fever" showed no marked excess in any of the large towns. The 43 deaths from diphtheria included 34 in London and 3 in Manchester. No death from small-pox was registered in any of the twenty-eight towns, and no small-pox patients were under treatment either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1345, and showed a further decline from recent weekly numbers; the patients admitted during the week were 107, against 103 and 112 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 1018 to 636 in the preceding three weeks, further fell last week to 428, and were 91 below the corrected average. The causes of 74, or 2·0 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Birkenhead, Manchester, and Cardiff. The largest proportions of uncertified deaths were recorded in Bradford, Bolton, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·9 and 26·4 per 1000 in the preceding two weeks, declined again to 21·9 during the week ending Feb. 7th, but exceeded by 2·1 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 9·7 in Greenock and 17·4 in Leith to 25·3 in Glasgow and 25·8 in Paisley. The 574 deaths in these eight towns showed a decline of 116 from the high number in the preceding week, and included 17 which were referred to whooping-cough, 12 to diphtheria, 9 to "fever," 7 to diarrhœa, 6 to measles, 6 to scarlet fever, and not one to small-pox. In all, 57 deaths resulted from these principal zymotic diseases, against 76 and 65 in the preceding two weeks. These 57 deaths were equal to an annual rate of 2·2 per 1000, which exceeded by 0·5 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had increased in the previous three weeks from 16 to 29, declined again last week to 17, of which 9 occurred in Glasgow, 4 in Edinburgh, and 3 in Dundee. The deaths from diphtheria, which had been 9 and 7 in the preceding two weeks, rose again to 12 last week, and included 4 in Glasgow, 3 in Dundee, and 2 in Edinburgh. The 9 fatal cases of "fever" exceeded those recorded in recent weeks; 3 occurred in Edinburgh and 2 in Dundee. The deaths from scarlet fever, which had been 18 and 10 in the preceding two weeks, further declined last week to 6, all of which occurred in Glasgow. The 6 fatal cases of measles were within 2 of the number in the previous week, and included 2 in Paisley. The deaths referred to diseases of the respiratory organs in these towns, which had declined from 228 to 207 in the preceding three weeks, further fell last week to 161, and were slightly below the number in the corresponding week of last year. The causes of 55, or nearly 10 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 38·4 and 32·6 per 1000 in the preceding two weeks, further declined to 26·6 during the week ending Feb. 7th. During the first five weeks of the current quarter the death-rate in the city averaged 34·1 per 1000, the rate for the same period being 25·0 in London and 21·0 in Edinburgh. The 180 deaths in Dublin showed a decline of 41 from the number in the preceding week, and included 3 which resulted from different forms of "fever," 2 from whooping-cough, 1 from scarlet fever, 1 from diphtheria, and not one either from small-pox or measles. Thus the deaths referred to the principal zymotic diseases, which

had declined in the previous four weeks from 15 to 6, were 7 last week; they were equal to an annual rate of 1·0 per 1000, the rate from the same diseases being 1·5 in London and 2·1 in Edinburgh. The fatal cases of "fever," which had been 5 and 4 in the preceding two weeks, further declined to 3 last week. The 2 deaths from whooping-cough exceeded those recorded in recent weeks; and the fatal case of scarlet fever was the first recorded in the city since the middle of December last. The 180 deaths in Dublin last week included 33 of infants under one year of age and 58 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further decline from those recorded in recent weeks. Three inquest cases and 3 deaths from violence were registered; and 41, or nearly a fourth, of the deaths occurred in public institutions. The causes of 25, or nearly 14 per cent., of the deaths in the city were not certified.

UNIVERSITY OF LONDON.

REVISED SCHEME.

[N.B.—*The clauses are re-numbered; to each clause is appended the number of the corresponding clause in the former draft.*]

I.—OBJECTS OF INCORPORATION.

1. The purposes of the incorporation of the University to be so defined as to include, in addition to the existing purposes, the promotion of regular and liberal education throughout Her Majesty's dominions, and especially in the metropolis and its neighbourhood. (1.)

II.—CONSTITUTION, &c.

2. The University to consist of—(i.) Senate, (ii.) Convocation, (iii.) Constituent Colleges, (iv.) Faculties, (v.) Boards of Studies, with the Queen as Visitor. (2.)

III.—SENATE.

Constitution of the Senate.

3. The Senate shall consist (in its final form) of the Chancellor and 31 Fellows to be appointed as follows:—(i.) The Chancellor and nine Fellows to be nominated by the Crown. (ii.) The Chairman of Convocation (*ex officio*) and nine other Fellows to be elected by Convocation, as follows: By the Graduates in Arts, 2; by the Graduates in Science, 2; by the Graduates in Medicine, 2; by the Graduates in Law, 2. In rotation by (1) the Graduates in Arts, and (2) the Graduates in Medicine, 1. Members of Convocation only to vote, and each member to be entitled to vote in respect of each of the said four subjects in which he holds a degree. (iii.) The President of University College, London (*ex officio*); the Principal of King's College, London (*ex officio*); and four other Fellows, two to be elected by each of those Colleges. (iv.) The Presidents of the Royal College of Physicians of London and the Royal College of Surgeons of England (*ex officio*); and two other Fellows, one to be elected by each of those Colleges. (v.) The President or Chairman of each of the following bodies—viz.: the Council of Legal Education and the Incorporated Law Society (*ex officio*). (vi.) To be elected by the Principals or Chief Officers of the Provincial Constituent Colleges. (vii.) To be elected by the London Faculties as follows: By the Faculty of Arts, 3; by the Faculty of Science, 3; by the Faculty of Medicine, 5; by the Faculty of Law, 1. (viii.) To be elected by the Provincial Faculties acting conjointly.

Retirement of Members.

4. The Fellows, other than the existing Fellows and Fellows *ex officio*, shall retire as follows:—In every year there shall retire one in each of the following groups—(1) Fellows nominated by the Crown; (2) Fellows elected by Convocation; (3) Fellows elected by University College; (4) Fellows elected by King's College. The other elected Fellows shall retire so as ultimately to give to each of such Fellows a three-years' tenure of office. The retirement of Fellows shall follow in each group the rule of seniority, or, failing seniority, shall be determined by lot, and any question as to the order of retirement shall be determined by the Vice-Chancellor, whose decision in writing shall be final. (10, 11, 17, 18.)

5. Any Fellow, other than the existing Fellows and Fellows *ex officio*, who shall not have attended any meeting of the Senate or of a Committee thereof during a consecutive period of two years, shall thereupon retire. (10.)

6. Power to the Crown and electing bodies to fill up casual vacancies occurring by death, resignation, or otherwise; but any person so appointed shall retain his office so long only as the vacating Fellow would have retained the same if no casual vacancy had occurred. (12.)

7. Power to re-nominate and re-elect. (13.)

Temporary Provisions.

8. The existing members of the Senate shall continue as at present. (14.)

9. No new Fellow shall be nominated by the Crown until the number of present Fellows appointed by the Crown not on the nomination of Convocation has fallen below nine, and then only so as to bring the number up to nine. (14.)

10. No new Fellow shall be elected by Convocation until the number of present Fellows appointed by the Crown on the nomination of Convocation has fallen below nine, and then only so as to bring the number up to nine. Until Convocation shall be in exercise of its powers to elect the whole nine Convocation Fellows, the election of Fellows shall be by the Graduates, as follows:—The first shall be elected by Graduates in Arts, the second by Graduates in Laws, the third by Graduates in Science, and the fourth by Graduates in Medicine, and so on in succession. (14, 15.)

11. The power of all other bodies to elect Fellows and the power of the Fellows *ex officio* to take their places as such shall take effect at once, or so soon as such bodies are constituted respectively. (16.)

12. The Senate shall have power to act, though not fully constituted.

Standing Committees.

13. There shall be a Standing Committee of the Senate for the Faculties of Arts and Science in connexion with the London Constituent Colleges in those Faculties. This Committee shall consist of the President and Principal of University and King's Colleges, of the Fellows elected by these Colleges, of the six Fellows elected by the London Faculties of Arts and Science, and of ten other Fellows to be elected by the Senate annually. The business of the Committee shall be to promote the organisation, improvement, and extension of University teaching in Arts and Science in and for London, including the establishment of professorships and teacherships in London, and to discharge such functions in relation to the said Constituent Colleges, and the examination of students therefrom in Arts and Science, as the Senate may from time to time delegate to them. (25.)

14. There shall be a Standing Committee of the Senate for the Faculties of Arts and Science in connexion with the Provincial Constituent Colleges, which shall discharge such functions in relation to the Provincial Constituent Colleges and the examination of students therefrom in Arts and Science, as the Senate may from time to time delegate to them. (27.)

15. There shall be a Standing Committee of the Senate in relation to the examinations in Arts and Science other than the examinations conducted under arrangements with the Constituent Colleges.

16. There shall be a Standing Committee of the Senate for the Faculty of Medicine. This Committee shall consist of the Presidents of the two Royal Colleges, the two Fellows elected by the said Colleges, the five Fellows elected by the London Faculty of Medicine, and one Fellow, holding a chair in a Provincial Constituent College of Medicine, to be chosen by the Fellows elected by the Principals or Chief Officers of the Provincial Constituent Colleges, and the Fellows elected by the Provincial Faculties acting conjointly, and nine members to be elected by the Senate. The business of the Committee shall be to discharge such functions in relation to the Medical Constituent Colleges and the examination of students in Medicine as the Senate may from time to time delegate to them. (27*a*.)

17. There shall be a Standing Committee of the Senate for the Faculty of Laws. This Committee shall consist of the President or Chairman of the Council of Legal Education and of the Incorporated Law Society respectively, of the Fellow elected by the London Faculty of Laws, and of four other members to be elected by the Senate annually. (27*b*.)

18. The Chancellor and Vice-Chancellor shall be *ex officio* members of all Standing Committees. (28.)

19. The Standing Committees shall in all respects be subject to the control and direction of the Senate. (29.)

IV.—CONVOCATION.

20. All elections by Convocation under this Scheme shall be conducted in such manner as Convocation may from time to time determine. (31.)

V.—CONSTITUENT COLLEGES.

London Constituent Colleges.

21. The London Constituent Colleges shall be—In all the Faculties: University College, London; King's College, London. In the Faculty of Medicine: the Medical Schools of Charing-cross Hospital, Guy's Hospital, London Hospital, Middlesex Hospital, St. Bartholomew's Hospital, St. George's Hospital, St. Mary's Hospital, St. Thomas's Hospital, Westminster Hospital, and the London School of Medicine for Women. (33.)

22. There shall be determined by agreement between the Senate and each Constituent College, or, failing agreement, by the decision of the Lord President of the Council, the number and qualifications of the Faculty or Faculties for the College.

23. The Senate shall have power from time to time to admit as London Constituent Colleges such other Colleges, in or near London, as (1) give academical instruction upon a complete system and an adequate scale in all the Faculties, and prepare, or are intended to prepare, students for degrees in the University, or (2) give instruction upon an adequate scale in one or more, even though not in all, the Faculties, and prepare, or are intended to prepare, students for degrees in the University; but shall previously invite an expression of opinion from the Board or Boards of Studies interested. The Senate shall consider in respect of every institution seeking admission the following points:—(*a*) The character of the teaching and of the educational appliances. (*b*) The character of the foundation. (*c*) The average age of the students. (*d*) The number of students proceeding from the College to the University. (*e*) The relation of the College to any other University. (32, 35.)

24. On the admission of a Constituent College the following matters shall be determined by the Senate—viz.: (*a*) The Faculty or Faculties to which the College shall belong. (*b*) The number and qualifications of the Faculty or Faculties for the College.

25. The Senate shall have power, after consultation with the Board or Boards of Studies interested,—(*a*) To increase or diminish the number of the members of any Faculty or Faculties representing any Constituent College. (*b*) To remove any institution from being a Constituent College, subsequent to any appeal to Her Majesty in Council. (37.)

Provincial Constituent Colleges.

26. The Provincial Constituent Colleges shall in the first instance be such institutions situated in England or Wales, but not in or near London, as shall be determined by the Senate, having regard to the conditions and matters contained in Clause 23, and the determination to admit any institution as a Provincial Constituent College shall include the matters specified in Clause 24. In the case of any institution whose claim to admission as a Provincial Constituent College is not allowed by the Senate the determination of the Senate shall be subject to an appeal to the Lord President of the Council. (37*a*.)

27. The Senate shall have power hereafter to admit as Provincial Constituent Colleges other institutions situated as described in Clause 26, and to remove any institution from the number of Provincial Constituent Colleges; such powers to be exercised under the like conditions and limitations as are contained in Clauses 23, 24, and 25 respectively. (37*b*.)

Present affiliated Colleges.

28. The affiliation of Colleges to the University as now existing shall cease. (38.)

Recognised Medical Institutions.

29. The institutions from which the University receives certificates for degrees in Medicine shall retain their right of giving such certificates, whether they be or be not Constituent Colleges. But the Senate shall have power, after consultation with the Board of Studies of the Faculty of Medicine, from time to time to revise or to add to the list of such institutions, and to determine in what branches of medical education the certificates of each of the said institutions shall be received. (39, 40.)

VI.—FACULTIES.

London Faculties.

30. There shall be in connexion with the London Constituent Colleges four Faculties—viz.: (1) Arts, (2) Science, (3) Medicine, (4) Laws. All departments of knowledge in which examinations may be held by the University, and which are not included in any other of the Faculties, shall be included in the Faculty of Arts. (41, 42.)

31. Each Faculty shall consist of the teachers of London Constituent Colleges, as determined under the foregoing Clauses 22 and 24. (43.)

32. The London Faculties shall elect members of the Senate, as provided in Clause 3. (44.)

33. Each Faculty shall elect members of a Board of Studies. (44*a*.)

34. The chairman for the time being of the Board of Studies shall be the chairman of the Faculty. (45.)

Provincial Faculties.

35. There shall be also in connexion with the Provincial Constituent Colleges Faculties in all subjects in respect of which such Colleges are respectively admitted. The provisions of the foregoing Clauses 30 to 34 shall apply to the Provincial Faculties, substituting the word "Provincial" for the word "London" in such clauses. (45*a*.)

VII.—BOARDS OF STUDIES.

London Boards of Studies.

36. There shall be for the London Faculties a Board of Studies in each Faculty. (46.)

37. Each Board of Studies shall consist of—(*a*) Such a number of members elected by the Faculty, being 4, 8, 12, or 16, as the Faculty shall from time to time determine. (*b*) Two members of Convocation, elected by the members of Convocation, who are Graduates in the subject with which the Board of Studies is conversant. (*c*) An examiner in each subject in the Faculty in which examinations are for the time being held in the University. (*d*) If the Board of Studies shall so think fit, such person, whether members of the University or not, eminent in the subject of the Faculty, not exceeding two in number, as may be from time to time elected by the Board. (47.)

38. One-fourth of the members of the Board elected by the Faculty shall retire each year. (48.)

39. Any casual vacancy among the members elected by the Faculty occurring by death, resignation, or otherwise, shall be supplied by the members of the Board; but any person so appointed shall retain his office so long only as the vacating member would have retained the same if no casual vacancy had occurred. (49.)

40. The members of the Board elected by Convocation and the co-opted members shall retire every four years. (50.)

41. Retiring members of the Board shall be re-eligible. (51.)

42. The examiners in each subject may, if more than one, agree upon one of themselves to be the member of the Board of Studies. In case they fail to agree, the examiner shall be nominated by the Vice-Chancellor in writing. (53.)

43. Each Board of Studies shall have the following powers and duties:—(*a*) To elect a chairman every year. (*b*) To consider and report to the Senate upon any matter referred to it by the Senate. (*c*) To represent to the Senate its opinion on any matter connected with the degrees and examinations and teaching of the subjects of its Faculty. (*d*) To deliberate, if so requested, in conjunction with the Senate or any committee thereof. (54.)

Provincial Boards of Studies.

44. There shall also be Boards of Studies for the Provincial Faculties so far as constituted, and the provisions of the foregoing Clauses 37 to 43 shall apply to such Boards of Studies. But it shall be in the power of the Senate, if they see fit, to constitute a separate Board of Studies for the Faculties belonging to any group of the Provincial Constituent Colleges. (46.)

General.

45. Boards of Studies shall, if so from time to time requested by the Senate, and may, if they shall from time to time think it desirable, meet and act concurrently on particular subjects. This provision shall apply to meetings of the London and Provincial Boards of Studies, as well as to the meetings between Boards of Studies in different Faculties. (55.)

VIII.—MATRICULATION AND DEGREES.

Matriculation and Degrees in Arts and Science.

46. The Senate shall have power to enter into arrangements with the Constituent Colleges in Arts and Science jointly, or any of them separately, upon the following basis:—1. The approval by the Senate of syllabuses of courses of instruction proposed to be given in the Colleges to candidates for Matriculation and for the Pass Examinations for the degrees of B.A. and B.Sc. 2. Production of evidence satisfactory to the Senate of diligent attendance at such College lectures, and for such times as may from time to time be prescribed by the Senate. 3. Examinations of students, being candidates for Matriculation and the Pass Examinations for the degrees of B.A. and B.Sc., by a College professor or teacher in the subject, or other person appointed by the College, and an examiner to be appointed by the Senate, with power to the Senate to make regulations or by-laws from time to time for dealing with any cases in which the examiners may be unable to agree upon their report. 4. The conferring of the degree on the foregoing conditions. (56.)

Degrees in Medicine.

47. The Senate shall have power to enter into arrangements with the Royal Colleges for conducting the examinations in Anatomy, Physiology, Medicine, Surgery, and Midwifery for the Pass M.B. degree by a Board of Examiners, consisting of the examiners appointed by the University, and examiners to be appointed by the Royal Colleges, who shall join in the reports to the Senate on such examinations. The examiners appointed by the University may be called upon, if the Senate so think fit, to make in addition separate reports. These examinations may, if so agreed on, be conducted in combination with examinations for the Royal Colleges. The arrangements for giving effect to this clause shall be carried out under the direction of a committee to be appointed in equal numbers by the Standing Committee for the Faculty of Medicine and a committee to be appointed by the two Royal Colleges. Such arrangements to be subject to the approval of the Senate and of the two Royal Colleges. This arrangement for joint examination shall not lessen or interfere with the duty of the Senate to be satisfied as to the adequacy of the examinations in all respects. (59.)

48. Candidates for Degrees in the Faculty of Medicine to show that they have passed through the required courses of instruction in one or more of the Constituent Colleges in that Faculty or of the recognised Medical Institutions. (58.)

General.

49. With the exception of Examinations for Degrees in the Faculty of Medicine and of Examinations to be held under arrangements with Colleges under the powers hereinbefore contained, candidates shall be admitted to all examinations without regard to their place of education. (57.)

Honorary Degrees.

50. Power to be given to the Senate, with the consent of the Chancellor and Vice-Chancellor, to confer Honorary Degrees. (60.)

IX.—PROFESSORS.

51. Power to hold real property, and to accept grants, gifts, devises, and legacies for the purposes of the University, including the establishment of Professorships and Lectureships, whether attached or not to any particular College, and the furtherance of regular and liberal education and of original research. (61.)

52. Power to the Senate in the event of the establishment of Professorships or Lectureships to assign to the professors or lecturers a representation on the Faculties. (62.)

Correspondence.

"Audi alteram partem.

"FAILURE OR CURE?"

To the Editors of THE LANCET.

SIRS,—An important practical question is raised in a letter published on page 338 of your last number. The profession has been led to believe that when the ovaries and Fallopian tubes of a woman have been removed on account of symptoms supposed to be due to their diseased condition, if she is not killed by the operation she will be cured of her disease. Now we are told that hæmatocele may not improbably convert a cure into a failure. To quote the words in the letter I have just referred to: "Such hæmatoceles interrupt the convalescence of such cases. Everybody knows that who has had any experience of them except Sir Spencer Wells." I am free to confess that I never met with such an interruption to convalescence in my own practice, and the confession of its frequency in Birmingham practice may, it is to be hoped, exert a salutary influence upon the threatened dangerous epidemic of unnecessary mutilation. I have heard nothing from any member of the committee appointed by the Gynæcological Society to investigate the case which led to this correspondence; but I shall be glad to reply to any question they may ask, or introduce any one of them who may be selected by his colleagues to the patient, who is still in London. I may also add that I never spoke of the disease as a "neurotic ailment," but I do say that to call it a case of "incurable pyosalpinx" is as absurd as to assert that I was answerable for the performance of the operation at Birmingham in 1888 because a telegram is said to have been sent to somebody unnamed: "Wells has been communicated with, and declines to advise." I will only add that the publication in the medical journals and in the Transactions of the Gynæcological Society of the supposed fact that this lady had gonorrhœa some eighteen years before the asserted pyo-salpinx (although she had had two children and one miscarriage in the interval, had enjoyed seven years' good health after part of her cervix uteri had been removed, had travelled abroad with enjoyment for several months after her second marriage in February, 1888, and only after an accident in the autumn in Scotland was unfortunately induced to submit to an operation in Birmingham, from which she has never recovered, and for which we are told that I am responsible because I "declined to advise") is, in my opinion, a disgraceful breach of professional confidence. It

is aggravated by the subsequent statement made at the last meeting of the Society that the case had been in the law courts, and was a *cause célèbre*. There is not a shadow of truth in this cruel calumny. It never was in any law court.

At page 294 of your current volume, it is stated in the report of a lecture delivered at Glasgow that I, who may be said to have been one of the earliest advocates of exploratory incisions, discountenance them because a young lady is said to have been brought to me in 1884 by her medical attendant (who is not named), and that I then discouraged operation. The tumour I then found is said to have increased afterwards, and to have been removed last year. It is not stated whether I saw the patient or not after 1884. If I knew the name of the surgeon who is said to have brought her to me, it is not at all improbable that the inaccuracy in the statements of the case brought before the Gynæcological Society would be equalled in the statement of the case of this young lady; and that the whole story, if not essentially fabulous, would still prove to be exactly such a "truth which is half a truth," as Tennyson has stigmatised in immortal verse.

I am, Sirs, yours truly,

Upper Grosvenor-street, Feb. 10th, 1891. T. SPENCER WELLS.

*** This correspondence must now cease. We cannot afford further space for the prolongation of this unfortunate controversy.—ED. L.

INSURANCES ON THE LIVES OF PHYSICIANS.

To the Editors of THE LANCET.

SIRS,—Some time ago Mr. James Chatham addressed a letter to THE LANCET, in which he showed that the mortality among medical men was far in excess of the expected number, as calculated by the Actuaries' Healthy Males Table. He took his data from the census returns of 1861. 1871, and 1881. His conclusions I by no means desire to call in question. They serve very pointedly to indicate in a sufficiently telling manner the sacrifices, even of life itself, which medical men are daily called upon to make, and which they cheerfully make, for the welfare of their fellow-men. But, from a life assurance point of view, it appears to me that this method of calculating the value of the life of a medical man is hardly a fair one; for it must be remembered that the mortality rate which Mr. Chatham worked out is obtained from the deaths of all medical men in the United Kingdom, at all ages, assured and non-assured. Now, it is well known that many of these die quite young, before they attain the average age at which medical men think it necessary to assure their lives, by reason of the peculiar risks and hardships to which their calling subjects them. Further, in common with all who desire to assure their lives, medical men have to submit to a thorough medical examination, and thus the unhealthy are excluded, and the company assuring them has to deal with selected risks who will be much more likely to fulfil their expectation of life than the general body of medical men. To some extent this is borne out by the investigation of the mortality statistics of the Scottish Widows' Fund and Life Assurance Society, on which I am at present engaged. The period extends over fourteen years, and the number of claims amounts to 5505. Of these, 248 are made by the representatives of medical men. (Under this heading I class physicians, surgeons, and dentists.) The average age at which they assured their lives was thirty-five, and their average age at death was fifty-six in round numbers. Their expectation, according to the Actuaries' Healthy Males Table, was thirty-one years, and of this they fulfilled, on the average, twenty-one years. Now, the average duration of the whole 5505 was only 20·790 years, in round numbers twenty-one years; and the average age at death of the total number was 57·633. It would thus appear that medical men are quite up to the average of assured lives in fulfilling their expectation of life. A further examination brings out the fact that they are a better class of lives than shopkeepers, engineers, architects, teachers, artists, and much better than bakers, butchers, masons, commercial travellers, clerks, and bookkeepers. Mr. Chatham showed that the lives of medical men, in the whole country, were shorter than those of coalminers. But, from the example I have been able to adduce, this does not seem to hold good for selected lives.

It may not be without interest to some of your readers to learn what are the principal disorders by which medical men are cut off. In common with other members of the Society, a large percentage die of heart disease and diseases of the nervous system. But, as might almost have been predicated, a large number succumb to pneumonia; nearly double the number died of this disease as contrasted with the other insurers. The same remark applies to enteric fever and other zymotic diseases, while more than the average come to an untimely end by violent or sudden death. These causes are manifestly incidental to their calling, and probably cannot be well guarded against. On the other hand, it is curious to note that consumption claims as its victims only about one-third of the total average of deaths from this cause, and no less than thirteen attained the venerable average age of eighty-four, and were justifiably classed as dying of "old age."

I am, Sirs, yours faithfully,

Edinburgh, Feb. 10th, 1891. CLAUD MUIRHEAD, M.D.

DR. KOCH'S FLUID.

To the Editors of THE LANCET.

SIRS,—In connexion with the action of Dr. Koch's fluid on lupus would you allow me to call attention to Dr. Fehleisen's experiments with pure cultivations of the micrococcus of erysipelas on this disease, to which I have not noticed any reference in discussions on the subject. The translation of Dr. Fehleisen's paper appears in the Sydenham Society's volume, "Micro-parasites in Disease," published in 1886. On page 272 of this volume, speaking of the curative effect of erysipelas, he says: "I shall also omit the descriptions of its curative effect in chronic joint affections and different forms of syphilis, although particularly in connexion with the latter many reliable accounts exist. The curative effects on lupus are, however, well guaranteed by a number of trustworthy and experienced observers, of whom I need only mention Helva." Further on, page 278, he gives the result of an inoculation in these words: "In order to exclude the objection that the cultivation was dead, a fifth patient, a girl twenty-nine years old, who was suffering from an extensive lupus of the face, was at the same time inoculated with the rest of the same cultivation. She had also recovered from erysipelas of the face in Dec. 1881. The rigor appeared forty-seven hours after inoculation, the temperature rose at once to 39·5° C. and reached the same day 40·1° C., and on Oct. 28th (i.e., four days after inoculation) it became normal. The disturbance of general health was in this case very marked. The short duration of the attack may be accounted for by the fact that the patient had had an attack of erysipelas of the same place ten months previously. The lupus healed as the result of the erysipelas with the exception of a few nodules in the neighbourhood of the nostrils." Dr. Fehleisen's paper and experiments open up many questions of deep interest to the profession into which I shall not now enter. In connexion with Dr. Koch's fluid they raise the question whether the action of this fluid on lupus (and possibly in chronic joint affections) has any specific relation to the tubercle bacillus from cultivations of which it is said to be produced.

I am, Sirs, yours truly,

Exeter, Feb. 9th, 1891. HENRY DAVY.

A PLEA FOR LIBERTY.

To the Editors of THE LANCET.

SIRS,—In the introduction to a collection of essays lately published, and entitled "A Plea for Liberty," Mr. Herbert Spencer says: "The root of all well-ordered social action is a sentiment of justice, which at once insists on personal freedom, and is solicitous for the like freedom of others, and there at present exists but a very inadequate amount of this sentiment."

In ancient Egypt, as Herodotus tells us (II. 84), the art of healing was distributed into several departments, each practitioner occupying himself with a single disorder, and no more. This subdivision, maintained from generation to generation, did, no doubt, for a time favour the attainment of personal knowledge and skill, but, by persistently contracting the intellectual sympathies, and circumscribing the range of observation, it ultimately defeated its own end. There was, however, a more pernicious influence at

work. Under the tyrannical sway of the priest-physicians, every medical man was, according to Diodorus Siculus (I. 82), obliged to apply his remedies in conformity with rules laid down in certain books deemed sacred. If his patient died he was freed from blame, provided he had observed these rules, but if he had not, he was tried for his life. With precept and practice both penally prescribed, independent research and free inquiry were impossible; and it is not surprising, in spite of Homer's praise of Egyptian physicians as "skilled beyond all human kind," that theoretic medicine made so little progress.

Considering the temper and bearing of some of the so-called leaders of our profession, and the tone of several of the controversies that have of late been carried on in your columns, can we say that the spirit which animated the sacerdotal caste of ancient Egypt is yet extinct?

I am, Sirs, yours truly,

Feb. 7th, 1891. JOHN TWEEDY.

ON THE OPERATIVE TREATMENT OF DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—Few things could be more personally distasteful to me than to find myself differing strongly in opinion from Dr. John Williams and Dr. Champneys. On this occasion, however, I should be false to my convictions if I did not express my dissent from their view. I deprecate as strongly as they the removal of healthy ovaries, whether ill developed or otherwise, simply for the relief of pain. The question on which we differ is the proportion of cases of actual disease of the appendages in which, "on ordinary surgical principles," operative interference is called for. I believe this proportion to be much larger than they seem prepared to admit. In a paper published five years ago[1] I wrote as follows: "I have now for some time been convinced that surgical interference affords us the best, if not the only, means at our disposal of relieving and curing a large number of women who have hitherto drifted on from year to year without sensible amelioration of their suffering, and who have long been the opprobria of our gynæcological out-patient and consulting rooms." This conviction, slowly and reluctantly arrived at, increased experience has but served to deepen. I hope before very long to bring before the Obstetrical Society the evidence furnished by my own cases. I shall then be prepared to discuss the subject fully, and to state the grounds on which my opinion and practice are based.

I am, Sirs, yours faithfully,

Brook-street, W., Feb. 9th, 1891. CHAS. J. CULLINGWORTH.

To the Editors of THE LANCET.

SIRS,—Certain statements contained in the joint letter of Drs. John Williams and Champneys in your issue of Feb. 7th seem so widely at variance with the teaching of other gynæcologists that those who are still open to conviction, and desire to ascertain which creed is the true one, must be excused if they venture to seek for fuller information than the letter gives. Is it permissible to ask the authors of the letter to fulfil the same obligations to the profession as they require from those who differ from them—viz., (1) to state the number of women seen during the periods they refer to a little more exactly than by "thousands," and (2) the proportion of "tubal" cases among them. Further, it would be highly valuable to learn what proportion of cases of pyo-salpinx or suppurating ovary, or of tubercular, tubal, or ovarian disease, has been cured by patience? What is the average duration of such cases when treated by patience? How long is pelvic suppuration to be left uninterfered with after diagnosis and treated with patience? Is "patience" synonymous for purely expectant treatment, or what is meant? "Patience and resignation will lighten every difficulty," but it is just as true *non est vivere sed valere vita*. Will the authors formulate some more definite and precise rules for general guidance as to when it is "imperative to operate," when advisable? Such great advances have been made within the last ten years in cerebral, renal, hepatic, and splenic surgery, that one cannot help feeling that pelvic surgery also may be improved by a fair and exhaustive discussion without regard for aught but the best interests of humanity. *Pluris est oculatus testis unus quam auriti decem.* Five years ago I was prejudiced against tubal operations; since then, and particularly within the last year or two, I have seen a considerable number of such operations. The result has been that in practically every instance the pathological condition has amply proved the absolute necessity for surgical interference. I am, Sirs, yours truly,

Grosvenor-street, W., Feb. 9th, 1891. A. D. LEITH NAPIER.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 17th (p. 145) my own opinions upon this subject will be found expressed in the summary of my paper, which was read in conjunction with Dr. William Duncan's. The moral that I meant to draw was more extreme than any included in the manifesto of two distinguished London obstetricians[1] and in a letter from a colleague.[2] Let readers of papers beware how they advocate the removal of appendages for chronic inflammation. Such is the warning note sounded by Drs. John Williams and Champneys. Let readers of papers beware how they advocate any active treatment of appendages affected with chronic inflammatory disease, say I. If an experienced operator writes about "successful cases" of oöphorectomy—which means cases that have recovered from the operation—only too many inexperienced men will be tempted to operate. We must beware, however, how we deprecate operations, for, unless we express what we mean very accurately, we may be misunderstood. I trust, Sirs, that in my paper I made myself clear. In warning men against abdominal section for the class of disease in question we must, as a bounden duty, remind them that unlimited "minor gynæcology" is yet more unjustifiable. For the inexperienced are easily dissuaded from operating; unfortunately they are apt to think that "minor" proceedings are safe and justifiable. Dilatation of the cervix and scraping, valuable in pure endometritis, are fascinating to the practitioner who may dread to open the abdominal cavity. Nevertheless, I know that "curettage" may cause even worse results than injudicious oöphorectomy. In short, I fear, or rather I know, that there is not only too much oöphorectomy, but also too much active treatment of chronic disease of the appendages by the curette and other appliances. Not only do I go further than the distinguished authors of the manifesto, but I also go as far if not further than my colleague. Mr. Meredith shows that but few oöphorectomies for chronic disease are performed at the Samaritan Free Hospital, where there is much operating for the removal of tumours. Dr. Cullingworth, in reply to my colleague,[3] remarks that at the Samaritan Hospital we receive an overwhelming proportion of abdominal tumours. On the other hand, at the general hospitals "cases of pelvic inflammation, due to or complicated by Fallopian tube disease, are admitted (*sic*) in at least equal proportion with cases of ovarian tumour." Dr. Cullingworth is labouring under a false impression, unless we dwell strongly on the word "admitted." The truth is that in the out-patient department of the Samaritan Hospital hardly a day goes by without cases of chronic disease of the appendages applying for relief. On the other hand, many weeks often pass without a single case of true ovarian tumour being seen. Mr. Meredith and myself have had ample opportunities for gaining experience of chronic disease of the appendages. We happen, however, to be in accord with the authors of the manifesto. We might admit many of these cases, until the number of oöphorectomies greatly exceeded the ovariotomies. We act otherwise, however, as we find that many cases of chronic disease get well when treated as out-patients. Some obstinate cases recover when admitted into the physicians' wards. There remains a "submerged tenth," as I may call it, where we consider that the sufferings of the patient "call for surgical procedures," as the authors of the manifesto say. My opinion as to the conditions which justify operation is expressed in my paper.—I am, Sirs, yours faithfully,

ALBAN DORAN.

Granville place, Portman-square, Feb. 9th, 1891.

To the Editors of THE LANCET.

SIRS,—Holding such strong opinions on the above subject as apparently Drs. Williams and Champneys do, if we may judge from their joint letter which appears in THE LANCET

[1] Brit. Med. Jour., Jan. 30th, 1886.

[1] THE LANCET, Feb. 7th, p. 337.
[2] Ibid, Jan. 31st, p. 276. [3] Ibid., Feb. 7th, p. 338.

of to-day, it must be a matter of surprise to the profession generally, as well as to myself, that neither of them took the trouble to attend and express those opinions either at the debate held recently on Dr. Playfair's paper at the Obstetrical Society or at the Medical Society on the papers of Mr. Doran and myself. Now, Sirs, it is clear that if the views expressed in that letter be correct, all those who operate, except on the rarest possible occasions, on the diseases we are considering resort to a practice which is (in your correspondents' words) *highly injurious to women and to the profession*. As these operations are performed at several of the large London hospitals, as well as at others throughout the United Kingdom by men who also have thousands of patients pass through their hands, do your correspondents mean to assert that the obstetric physicians and the surgeons at those hospitals are less anxious than they to promote the welfare of their patients and to maintain the honour and dignity of the profession? It passes my understanding how anyone can cure or profess to cure except by operation patients with their Fallopian tubes full of pus or dilated with serum, or those in whom after recurrent attacks of pelvic peritonitis the ovaries and tubes are matted to the other pelvic organs by old adhesions, or how the conditions just mentioned can alter (except for the worse), even with years of rest and patience, which most of the women suffering in this manner are absolutely unable to take. I feel certain that those who operate on these cases, as well as those who are witnesses of the operations, are of the same opinion. The last sentence in your correspondents' letter reads thus: "In no other department of surgery is inflammation of an organ considered to justify its removal." Can it be possible they are so little cognisant of what goes on in the surgical world as to be unaware that the hip- and knee-joints, for example, are being daily opened in cases of chronic inflammation in order to remove the diseased parts, or that when, only a few years back, Sir Joseph Lister advocated and practised opening the latter joint antiseptically a well-known London surgeon threatened, in the event of a fatal case occurring, that the distinguished operator might find himself in the dock on a criminal charge?

By all means hedge round these cases by some such rule as that mentioned in my letter (which you publish to-day) as being in force at the Middlesex Hospital, so that both patient and operator may be thoroughly safeguarded; but, on the other hand, let us not be hampered in doing what we conscientiously believe to be the best for our patients by the statements of those who, on their own admission, have practically no experience whatever of the operation in question, and whose opinions cannot reasonably be expected to carry greater weight than the opposite views of others possessing as wide—or wider—acquaintance with the diseases of women. Doubtless, in years to come, your correspondents and those with like views will change round, but it is, to my mind, sad to contemplate the suffering which must meanwhile be endured.

When I said at the Medical Society on the 17th ult. that the results in my abdominal section cases at the Waterloo-road Hospital, before it was put in a good sanitary condition, were so bad, I did not of course mean in any way to reflect on the authorities, for immediately they were informed of the condition existing they had the drainage completely overhauled at great expense, with the result that since 1885 only five of my cases have died after abdominal section at that hospital. Where the surroundings are insanitary, to compare the results in cases in which the peritoneal cavity is opened with those of ordinary surgical operations (as your correspondents suggest), or even with ordinary gynæcological operations, would, as every medical man knows, be obviously useless and misleading.

The proper place for the discussion of an important subject is at a meeting of a learned Society, and not by letters in the medical journals. If those who object to operating in the treatment of chronic disease of the uterine appendages will bring the subject forward before any of the Societies, they may rest assured that not only I, but many others holding views similar to mine, will take care not to be absent. Meanwhile, I see no good likely to accrue from continuing a controversy in your columns, and, in concluding, must ask your correspondents to carefully peruse, not only my paper, but also a letter from me which you publish to-day.

I am, Sirs, faithfully yours,

Harley-street, W., Feb. 7th, 1891. WILLIAM DUNCAN.

To the Editors of THE LANCET.

SIRS,—I have to request that I may supply an omission in Drs. Williams and Champneys' letter. They say that "this particular operation has already furnished material for legal proceedings in a well-known case. It is conceivable that it might form the object of legislation." I find it to be generally accepted that their allusion is to an action which was brought against me four years ago. As I am unaware of any other case to which their remark can refer, I am compelled to remind these gentlemen that the jury, convinced by the evidence before them, gave a unanimous verdict in my favour without waiting for counsel's summing up, and that I won the action with costs. To omit any indication of the conclusion of these legal proceedings is misleading to the profession, to whose "good sense" the writers of the letter appeal, and is also injurious to me. They profess to accept Bernutz's pathological observations, which are based upon many fatal cases; yet they hold that "death from diseases of the appendages is of extreme rarity." This was not the opinion of the late Dr. Alfred Meadows, to whom we are all indebted for Bernutz's memoirs, and who had probably more practical knowledge of the pathology of these pelvic diseases than any of his contemporaries. So convinced was he of their gravity and of the need for surgical interference that he—a busy man—spent three days in Liverpool in order that he might add his testimony to the evidence of the many eminent witnesses who appeared in my behalf, and was only prevented from entering the witness-box by the law's delay and by urgent telegrams recalling him at the last moment to London.

Surgical treatment of the inflammatory diseases of the uterine appendages is now the accepted practice in Birmingham, Edinburgh, Manchester, Leeds, and other towns, and I fail to see the benefit of a reprint of ancient denunciations. It is certainly conceivable that it might form the subject of legislation. But Drs. Williams and Champneys themselves remove the appendages "when life is threatened" and "when the health has been impaired for many months," and probaby they wish to be free to continue these operations. But the threatened legislation may fail to make suitable provision for their wishes. In THE LANCET four years ago I called upon my critic to publish *his* cases, but they have not yet seen the light. Before the good sense of the profession is exercised upon Dr. William Duncan's cases, Drs. Williams and Champneys should publish theirs *seriatim* for comparison.

I am, Sirs, yours obediently,

Liverpool, Feb. 10th, 1891. FRANCIS IMLACH.

ERYSIPELAS AND TOTAL ABSTAINERS.

To the Editors of THE LANCET.

SIRS,—I think it may be interesting to note the fact that I have at present under treatment three Guardsmen suffering from very severe attacks of idiopathic erysipelas of face and scalp, contracted from exposure in the recent severe weather, and that in each of these cases the patient is a total abstainer. The men are strong, healthy-looking men in the prime of life. In one case the patient suffered from pneumonia as recently as last November, but in the other two cases no history of previous ill health existed. These men came from different regiments, and no insanitary conditions were observed in connexion with their cases. Alcohol is so often blamed as a predisposing cause to this disease, and no doubt is so when taken in excess; but is the temperate drinker in a better or worse position to resist extremes of temperature than the total abstainer? This occurrence of the disease among total abstainers may be only a coincidence, but it looks a significant fact that the only three cases at present existing in the London garrison (over 3000 strong) should come from a comparatively small body of men, such as the total abstainers are in comparison with the non-abstainer. Considering the value of alcohol as a heat-producing food, and that the probability that the disease in these instances was caused by extreme cold acting on tissues whose vitality was lowered, there seems some evidence of cause and effect. From my experience in hot climates I certainly think it is a very open question whether even there the moderate use of alcohol is not beneficial. I am inclined to believe that the stimulating effects of alcohol are most useful in producing digestion and proper nutrition. I would include in the term moderate

drinkers only those who do not take more than two ounces of absolute alcohol in the day, and take that either with or just after their meals.

I am, Sirs, faithfully yours,

H. R. WHITEHEAD, F.R.C.S. Eng.,
Surgeon, Medical Staff.

Coldstream Guards Hospital, Jan. 26th, 1891.

INTESTINAL IMPLANTATION AND LATERAL APPOSITION.

To the Editors of THE LANCET.

SIRS,—In your issue of Jan. 31st my old friend Mr. Jessett suggests that ileo-colostomy, in the cases of cancer of the cæcum on which Mr. Bryant and I did ileostomy, would have been a better procedure, and his chief argument seems to be that the patients would then not have had fæcal fistulæ. I presume he means "artificial anus," as the object of the operation is to prevent any intestinal contents passing over the diseased surface, which, in the case of ordinary intestinal fistulæ, is not the result. But would the patients have recovered after ileo-colostomy by implantation or apposition? So much depends on the local conditions met with at the time of operation and on the patient's general state that no hard-and-fast rule of conduct can be formulated, and in cases of cancer where any operation except removal (which seems rarely to be indicated at the stage we see cases) can only be of a palliative nature, the simpler the method the more appropriate it appears to me to be. Enterostomy, if done in time, is simple, of rapid execution, and effective, and in another case I would make a free opening low down in the ileum *at the time of operation*, so as to ensure all intestinal contents passing at once through the incision. In these cases the sufferer has but a few months to live, and an opening low down in the small intestine provides for nutritive needs, and with the use of a properly fitting obturator and oakum or wood-wool pads life is very bearable, providing pain and irritation be abolished or much diminished. I would remind my surgical brother now in arms that the fault, or rather the misfortune, in the shape of illness which befel him prevented his accepting my invitation to be present. It is probable, had he been with me, that the operation he suggests would have been done. I think it our manifest duty to give our patients the benefit of experience greater than ours in any particular branch of surgery, and I have no personal knowledge of, or care for, jealousy of so-called specialists in any domain. The onus of showing the profession that the new intestinal operations introduced by Senn, and ably continued and advocated by Mr. Jessett, are of as easy execution and as safe in result as already accepted means rests with these gentlemen, and until this be done cautious surgeons will rely on older plans, except in such desperate cases as that on which I operated last Thursday. Boldness is not always synonymous with wisdom, nor is carefulness the necessary autotype of surgical cowardice or timidity. So far as is in my ken, there are no published records of sufficient successes of these new methods in human beings, but I trust that Messrs. Senn and Jessett will soon remedy this defect. Another argument for ileostomy is that ileo-colostomy would take longer to execute, and in order to make the opening in a healthy colon one would have to go at least three inches from the diseased part, since if the operation succeeded the liquid or semi-solid contents of the ileum would gravitate down to the cancerous part and irritate it. This, I fear, is another real objection; but it may be urged the implantation or anastomosis could be made at the transverse or descending colon, so as to avoid this backward flow. I can only reply with the request to be shown some successes before I adopt, in ordinary cases, new proceedings. There is another objection which, in the present state of our experience, is to me a very substantial one. It is that, I believe, no one is justified in making serious experiments on human beings, and I cannot think but that all surgeons would deem a *confrère* more than rash who undertook these novel proceedings without the aid of the only two men who, so far as I know, have any experience of these operations. I allude to Mr. Jessett and Mr. Horsley, though I believe only the former has operated on the human subject. The technics of these operations are rather complicated until done or seen done, and the least slip in any detail will certainly most seriously endanger the life of the patient; so that I would urge anyone contemplating them to practise repeatedly on the cadaver, and if possible to secure the aid of one or other of these gentlemen. If, now that I have had experience of one case, my services are considered worth asking for, I shall be most happy to render them. As stated in my last letter, operations and surgeons must be judged by results, and ileo-colostomy is no exception to this wholesome rule. I have recently practised what I preach, and have availed myself of Mr. Jessett's valuable aid, most willingly given, in a difficult and complicated case of ileo-sigmoidostomy, and as this is the third serious operation I have had to perform on the same patient, and, moreover, as the narrative of these operations will, I am sanguine, prove of interest and instruction to surgeons, I will, with your permission, publish the case, with illustrations, in THE LANCET, whatever may be the result of the operation.

I am, Sirs, yours obediently,

Grosvenor-street, W., Feb. 2nd, 1891. H. A. REEVES.

P.S.—The patient is now (eleventh day) ready to be sent into the general ward, and complete details will be furnished when the case is published. With regard to the case of digital dilatation I ought to state that I heard from the patient on Feb. 7th. He says he wrote under the influence of morphia, and seems to be much depressed through physical suffering and financial distress. I think it highly probable that the relief undoubtedly afforded by the operation has been replaced by pain caused by the growth of the irregularities which I felt, and which are most likely epitheliomatous. Taking into consideration the fact that the bowel above the stricture was very much distended and hypertrophied, it would have been very risky and difficult to have tried excision and enterorrhaphy or lateral anastomosis. There can be no question that life has been prolonged, but whether it is worth having under such conditions is not for surgeons to decide. Their clear duty is to prolong life if they can, and, as a matter of fact, the large majority of patients elect to run considerable risk and subsequent discomfort if a reasonable promise of longer existence can be offered them. The time will come when surgeons will see similar cases earlier, and as the technique of intestinal surgery improves they will be enabled to deal more radically and successfully with them. *Currente calamo* I omitted to mention that, if my memory be correct, the patient derived relief for a time from the treatment ordered by the eminent physicians experienced in intestinal diseases whose advice he sought.

Feb. 9th, 1891.

THE MEDICAL DEFENCE UNION AND THE MIDWIVES' BILL.

To the Editors of THE LANCET.

SIRS,—I am sorry to find that an attempt is being made to drag the Medical Defence Union into "political" controversies. It is greatly to be regretted that the line upon which the present executive have so successfully worked—viz., defence of the individual member against outside attacks—has been departed from by a small majority at the general meeting. Personally I have no opinion of the Midwives' Registration Bill, but I voted against Dr. Rentoul's motion as a protest against the attempted use of the Union by him and his colleagues as a political agency. It is perfectly true that one of the articles of association of the Union gives the company power "to consider, originate, promote, and support legislative measures likely to benefit the medical profession," but there is no necessity to carry out every article in its entirety, especially when there is so much difference of opinion about any particular subject. The Union is young; it has had a dangerous and almost fatal illness soon after its birth; recovery was slow, but under the treatment of its able President convalescence is now thoroughly established, and its strength is daily increasing. It would be a serious danger to it were it to be exposed to the risk of infection from "political fever," a disease which prevails in some of our provincial towns in far greater severity than we have it in London, but even in those places can be successfully resisted with the usual common-sense precautions. I do not wish to enter into any discussion with regard to the Bill in question. All I desire is to urge all members of the Medical Defence Union who value its work, and who look upon it as a practical insurance against individual attack, to protest against any attempt to divert its power and usefulness into the uncertain

channels of politics. If such attempt is continued, as a member I shall propose to the executive that the articles of association shall be altered, and that the power to enter into such legislative action be taken away. A few members of strong political bias might resign, but I am satisfied that the loss would soon be regained by an accession of men who look upon the Union as a personal insurance company, and who object as strongly as I do to its being used for any other purpose which may be lawful, but is not expedient. I am, Sirs, yours faithfully,

Feb. 9th, 1891. A MEMBER OF THE UNION.

THE OBSTETRICAL SOCIETY AND THE MIDWIVES' BILL.

To the Editors of THE LANCET.

SIRS,—When the President at the annual meeting of the Obstetrical Society excluded all discussion on the merits of the Midwives' Bill or its details, I determined neither to speak nor vote on Dr. Aveling's resolution, which was simply a vote of confidence in the Council of the Society. Now, the Council of the Society having, both by circular to the Fellows and through the President in his address, disclaimed all responsibility for the present Midwives' Registration Bill, and the President having himself declared that he did not approve of certain of its clauses, and that this Bill, as amended by the Privy Council, does not contain the most important of the suggestions made by the Council of the Obstetrical Society, I saw no valid reason why I should vote for or against the resolution in the restricted shape in which it was put to the meeting. I went to the meeting under the impression that it would be open to any Fellow to give his opinion on the Amended Bill, and that we should not be restricted to a mere vote on the question as to whether any kind of legislative action was desirable. Many Fellows of the Society may approve of legislation, but they think they see such grave blots in the present Bill that no influential medical body, least of all an Obstetrical Society, should hesitate to express an opinion antagonistic to the Bill itself. When I found that all criticism on the details of the Bill was precluded by the President's ruling I merely protested against a vote on such a resolution as that of Dr. Aveling's being regarded as any expression of approval of the Bill itself. As a Fellow of the Obstetrical Society I feel, after the statement of the President, that the Society, through its Council, has been snubbed by the Privy Council, and that its suggestions have been ignored. When this occurred I am of opinion that the Council, in so important a matter, might have taken the Fellows into its confidence, and shown that the Bill was not constructed on lines approved by it, and thus much misunderstanding would have been avoided. It was widely circulated by the promoters of the Bill that it met with the approval of the Obstetrical Society. I was asked and pressed to add my name to a document on which appeared the names of many of the Council. This was an obliquely worded statement in which the desirability of legislative action was urged. When such documents, under the headings, "Registration of Midwives" or the "Midwives' Bill," are signed by influential members of the medical profession, they cannot be surprised if their signatures are used for the purpose of proving that they are in favour of the Bill itself. The Obstetrical Society by a vote has now deliberately pledged itself, and unconditionally, to the principle of legislation for midwives; legislation on what lines? Are the lines and limits to be those agreeable to and approved of by the medical profession and the Obstetrical Society itself, or on terms which will be forced on the profession and the Society by the Legislature. Certainly we must be prepared for this latter contingency if the Society, blindfolded, agrees to the principle of legislation, and calmly sits down while the safeguards it recommends are passed by and ignored. I say nothing of the standard of education adopted by the Obstetrical Society in granting midwives a diploma. It is to be hoped that a considerable alteration for the better in the conditions imposed for that diploma may follow should there be legislation on the subject. Meantime, I maintain that it is the duty of obstetricians to strive to prevent any Bill passing through the Legislature with such glaring defects as those existing in that one now before Parliament. Finally, I should have wished that, no matter how strongly pledged was the Council to the principles of legislation, the verdict of the Fellows should have been taken on the merits of the Bill itself. I am, Sirs, yours faithfully,

Feb. 7th, 1891. H. MACNAUGHTON JONES.

EMPYEMA OF THE ANTRUM.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of to-day you do me the honour to report in an annotation a communication on the above subject which I made to the Odontological Society on Feb. 2nd. Judging from my own experience I should say this subject must be of greater interest to the medical than to the dental profession; for, although I have tapped the antrum in a considerable number of cases, in no single instance has a patient applied to me directly in my capacity as dental surgeon. The cases have all been brought to me by practitioners by whom a diagnosis had been made; but many of the cases had been going on for months, some for years, often undergoing treatment wrongly directed, before the true nature of the malady had been made out. Not only is our knowledge of empyema of the antrum far from complete, but the existence of such a disease seems by no means sufficiently well known. The subject, it appears to me, might therefore with advantage be fully discussed in THE LANCET; and I shall be glad if you will allow me to supplement my brief communication by a few further observations. First, as to etiology. I am satisfied that dental disease is by far the commonest cause. The roots of several teeth are separated from the cavity by merely a thin layer of bone; sometimes the roots of molars extend within, covered only by a thin osseous film beneath the mucous membrane. Periodontitis affecting such roots may give rise to suppuration, and this extending to the antrum may establish empyema; or pent-up discharges from suppurating or gangrenous pulps ("nerves") of the teeth may make their way through root foramina into the cavity and excite the disease. In the great majority of cases which I have seen, whilst no other cause has been discoverable, dental disease amply sufficient to account for empyema has existed; and in other cases there has been a clear history of dental disease. But the case narrated to the Odontological Society has left me somewhat in doubt as to what may form etiological factors in exceptional instances. The pathology seems simple. Pus once present in the antrum the cavity can never be completely emptied except by art. Pus flows out when it reaches the level of the ostium, or when the head is inclined forwards; but a residuum is always left on the floor of the cavity, and this becoming putrid, and often inspissated, the mischief is aggravated, and the area of inflammation and suppuration is gradually extended over greater part of the antral lining. The symptoms, which in simple cases are almost pathognomonic, include discharge of fetid pus from the nostril of the affected side only; and, be it noted, the discharge is not continuous, but occurs at irregular intervals, and particularly when the head is inclined forwards. The patient is conscious of a noisome odour; but this is not, as a rule, perceptible to others except at the moment when foul pus is flowing from the nose. There is usually pain, and this may be confined to dull local aching, or may take the form of severe frontal headache and neuralgia. It is not safe to pronounce a positive diagnosis without thorough rhinoscopical examination, as the disease may be closely simulated by pathological conditions of neighbouring parts. It seems commonly believed that distension of the antrum with bulging of the walls is a usual accompaniment of empyema; but this is a mistake; it only occurs in those rare cases in which the ostium is completely blocked. I have met with only one instance of the kind, and in that the patient suffered most from pressure on the floor of the orbit and ophthalmic troubles. Not to enter into minutiæ which might take up too much of your space, the treatment may be described as free drainage and antiseptic irrigation—sources of local irritation such as diseased teeth being, of course, removed or otherwise dealt with. Effectual drainage can only be ensured by tapping the cavity through the alveolar margin or through the socket of a tooth and inserting a gold tube extending well into the cavity, and held in position by a plate such as is used to support an artificial tooth. Further accumulation of pus being thus prevented, the antrum must be thoroughly irrigated once or twice a day with an antiseptic lotion. A syringe, such as that devised by Mr. Christopher

Heath specially for these cases, must be used. It has a long, thin nozzle to pass well up the tube, and is capable, without exercising too much force, of throwing a continuous stream. The lotion should make its exit through the nose, the head being inclined forward. Cases of empyema, especially such as have been long neglected, often resist treatment for lengthened periods. Whilst care should be taken to ensure thorough irrigation, the danger of keeping up irritation by too much syringing and the use of unsuitable lotions must not be overlooked.

I remain, Sirs, your obedient servant,

Wimpole street, W., Feb. 7th, 1891. HENRY SEWILL.

SHOULD ERYSIPELAS BE ISOLATED?

To the Editors of THE LANCET.

SIRS,—The above question has been brought prominently before the medical profession in Hull owing to a recent decision of the local sanitary authority refusing to admit erysipelas into their Infectious Hospital, and omitting to make any suitable provision for such cases. In 1888, thirteen deaths occurred in Hull from erysipelas; during the fortnight ending Jan. 2nd, 1891, seven cases were notified in the borough. One of these cases (facial erysipelas) was under my care. It was in a very populous district; several confinements took place within a few doors of the case, which was of a malignant type; neighbours and visitors could not be prevented from passing to and fro between the cases; a midwife was in the infected house one day and the next night attending a labour, though warned of the danger; the room in which the case lay was ill ventilated, and no skilled nursing was available. Under these circumstances I desired the medical officer of health to remove the case at once to the sanatorium, but to my surprise found that he was unable to do so because the sanitary committee had decided not to admit any cases of erysipelas. Under proper hygienic conditions and with trained nursing the patient would, I believe, have recovered. Under the prevailing unfavourable conditions he died.

I brought the matter before the local sanitary committee and was answered by one of its members (a medical man) to the effect that he had never known erysipelas infectious in a private house under the worst of hygienic conditions; that there was little to fear from it as a cause of puerperal fever; and that neither experience, statistics, nor humanity would justify them in admitting erysipelatous cases into the sanatorium. Now, seeing that erysipelas is a specific contagious fever scheduled under the Infectious Disease (Notification) Act, 1889; that it may and does prevail epidemically; and, further, that it may, if not isolated, cause a series of cases of puerperal fever, I propound the above question to the medical profession through the medium of your columns.

The following statistics may be found in the Manual of Public Health (Wynter Blyth), 1890:—"During the twenty-five years ending with 1886, 51,582 deaths in England and Wales are ascribed to this cause. The maximum number of deaths was in 1874, when 3358 deaths were registered; the minimum number was in 1886, when 1523 deaths were caused by erysipelas, the mean number of the whole being 2063 ..... If the deaths from erysipelas and those from puerperal fever be plotted out for a sufficient number of years in a curve, according to season, the curves very fairly coincide."

I should be glad to receive any communication on the matter, privately or through your columns, from any members of the profession who may be interested in the subject.—I am, Sirs, yours truly,

Hull, Jan. 9th, 1891. EDGAR DU CANE, B.A., M.B.

DEATH CERTIFICATION AND LIFE ASSURANCE.

To the Editors of THE LANCET.

SIRS,—I shall be glad of your comments upon the following:—

A man, aged fifty-five years, was admitted, without any history, into the Crickhowell Workhouse Infirmary on Jan. 13th, 1891. Upon a superficial examination, he was emaciated to a frame, pulse very feeble and intermittent, but still conscious; a dislocation of the right knee backwards, and two bedsores over the tuberosities of the ischium. I ordered him brandy every hour, with a milk and beef-tea diet. I had known the man a year or so previously as one of slightly feeble intellect, but otherwise strong and in robust health. By repeated and careful examinations I could discover no disease to account for his condition, but he died six days after admission. As affording a possible clue to his treatment before he came under my notice, the nurse, three days prior to his death, having fed him, remarked that he "had taken more then than he had done at all since he came in." His reply, "Ha! they would have grudged me it at home," was to my mind suggestive in dealing with a man in his condition. I refused to certify as to the cause of death for the reason that I had been unable to find one, and reported such to the police authorities. The coroner was communicated with. This officer, however, came to the conclusion, from inquiries made, that the deceased died from exhaustion due to natural causes, and that an inquest was unnecessary. Now, I have never known in my experience a man fifty-five years of age die of "exhaustion" without being able to find a primary disease to account for it. Senile exhaustion would not apply in this case. Within a few hours after the coroner had given his certificate the friends of the deceased called upon me for a death certificate for an assurance office, in which the deceased's life had been insured, offering to "pay me anything" for it. I, however, declined, and referred them to the coroner. I may add that I never refuse a death certificate except upon what I consider strong ground, as any medical man would who had been told—as I myself have been—by a member of a Board under whom I serve that I withheld certificates in order to obtain fees for evidence at inquests! I am, Sirs, your obedient servant,

PHILIP E. HILL.

Crickhowell, Jan. 24th, 1891. Medical Officer Crickhowell Workhouse.

P.S.—I may add that, as far as I was able to ascertain, the dislocation was of nine months' standing, and had not been seen by a surgeon.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary.

THE annual meeting at the Royal Infirmary was held there on Saturday, the 31st ult. It was hoped that there would have been a good attendance of the trustees and general public, who would thus have the opportunity of seeing the splendid new pile which now occupies the former site, and is one of the greatest improvements which the city has had for a long time. Unfortunately the hour chosen, 11 A.M., was not a happy choice; had it been 3 P.M. or 4 P.M. there would in all probability have been a much better attendance. The new infirmary has been in full working for some time now, sufficiently long to show its many and great advantages. The cost of maintenance will probably require an increase to the income of £3000 a year, which ought not to be very difficult to obtain in so large and wealthy a city.

The Police-court and its Ventilation.

The ventilation of our police-court, like that of so many law courts, is very defective, and the air at times is so foul as to make a compulsory attendance there for any length of time a very serious matter to persons not used to a close atmosphere. The late Mr. Raffles, after nine years' experience of it, had a severe illness and was compelled to go away for some months. He fortunately recovered, and was enabled to discharge his duties for many years afterwards, but frequently complained of the state of the court. It is greatly to be hoped that some means will be found to secure a more wholesome atmosphere for those whom necessity compels to breathe it. The great defect is that of so many similar buildings—viz., an insufficient egress at the top for the foul air which is always ascending. There is no difficulty in securing the ingress of fresh air from outside and from the lobbies.

A Temperance and Purity Crusade.

In deference to a strong expression of public opinion, proceedings have been taken against all the keepers of brothels known as such to the police, and within the last few weeks nearly two hundred persons, mostly women, have been summoned, have pleaded guilty, and been fined £5 and costs. For a second offence one woman was fined £10,

or one month's imprisonment. Similar proceedings are going on daily, the total of cases to be dealt with being between 300 and 400. Besides these, many publicans have been summoned for serving drunken persons, for allowing their houses to be the habitual resort of prostitutes, and for permitting the latter to remain longer than was necessary. While it is gratifying to see that so much is being done to repress intemperance and vice, the ill effects of which are only too well known to medical practitioners, it would be contrary to all previous local experience to expect much good from this raid. As was remarked in THE LANCET some time ago, the "social evil" shows a terrible persistence, and a similar remark might be made of intemperance.

The Disposal of the Dead: Burial or Cremation?

Dr. Hope, the assistant medical officer of health, will to-morrow bring before the members of the Medical Institution the important question of the disposal of the dead, and will move a resolution in favour of cremation. A very interesting discussion may be expected. Apart from other considerations, it must be remembered that Liverpool contains a very large number of foreigners, who are favourably disposed towards cremation, and as Englishmen have always been permitted to have burial grounds and facilities for burial in foreign climes where cremation is the mode of disposal of the dead, it is only right that in this matter there should be reciprocity.

Liverpool, Feb. 11th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Hospitals.

MANY of our local hospitals have lately been holding their annual meetings. At the Clinical yesterday it was reported that additional land had been obtained adjoining the hospital, upon which it is proposed to erect extensions if the necessary funds (some £2000 to £3000) can be obtained. Increased number of patients treated and lack of funds were reported here as elsewhere. The Mayor of Manchester referred to the fact that hospital managers, in their reports, always appeared to dwell with satisfaction upon the increase in the number of patients. He was inclined to take another view of the subject, and to submit whether it might not be a source of satisfaction if the numbers diminished. Hospitals were not business concerns flourishing in proportion to the amount of work they did. The same gentleman, recently speaking at the annual meeting of the Children's Hospital, when the chairman took rather a gloomy view of the increased demands upon them and their shortness of funds, declared himself quite willing to face the possibility of hospitals being in part subsidised out of the rates in the same way that fever hospitals pretty generally are now. At the Eye Hospital a satisfactory state of the finances was reported for the year, and here, contrary to the usual experience, there has been a little diminution in the number of patients under treatment. At the annual meeting of the Victoria Dental Hospital funds for providing a new hospital at an estimated cost of £6000 were pleaded for. The *pourparlers* are still going on between the Infirmary and Owens College authorities respecting the proposed new hospital in connexion with the College and the extension of the present infirmary, but nothing of a definite nature has yet been resolved upon. In the face of a possible new hospital the need for any great extension of the present infirmary has scarcely yet been demonstrated. One very philanthropic proposal made by the Whitworth Trustees in connexion with their splendid gift to the College is to establish a special wing or pavilion for cancerous diseases, with a threefold object in view—to provide treatment for these sufferers, to afford opportunities for scientific study of these ailments, and to provide a permanent home for incurable cases amongst persons above the pauper class.

Hospital Collections.

Last Sunday was Hospital Sunday, and Saturday next is set apart for the collections from workshops &c. Last year showed a slight falling off in the Sunday collections, but a more than corresponding increase in the Saturday tones. In face of the almost universal cry of lack of funds, it is hoped that this year contributions may show a considerable augmentation.

Medico-Ethical Society.

This society, of which Dr. H. Ashby is the president for the current year, has mapped out for its consideration a special subject for the coming year—i.e., the causes of the high death-rate of Manchester. A series of papers have been arranged for by those of its members specially qualified to deal with such matters as infant mortality, cremation, influence of drink on the death-rate, unhealthy dwellings, &c., and it is also organising a staff of lecturers to go out among the masses of the people and deliver popular lectures upon sanitary matters. This is a somewhat new departure, but possesses potentialities of great usefulness.

Diphtheria in Salford.

Mr. Paget, the medical officer of health for Salford, has prepared a report upon the increased prevalence of diphtheria in that borough last year, and even at the present time it is far from having disappeared. He speaks very cautiously as to the actual causation, but exonerates the milk supplies from any suspicion of being concerned in it. He thinks the schools may have contributed to the spread of it after it was established, and he more than hints at the possibility of a polluted soil by the privy-midden system &c. as an important factor to be considered in connexion with it.

Housing of the Poor.

An interesting scheme is being set on foot, upon philanthropic-commercial principles, for providing cheap and healthy tenement homes for the poor. A number of well-known gentlemen interested in this social problem have formed themselves into a limited company to raise a capital of £20,000 for promoting the above object. They have acquired a large disused factory in Ancoats (one of the poorest districts of the city), and propose converting it into about 150 separate tenements, to be let at a rental of two shillings per week and upwards. The scheme appears to have been well thought out, and, if the expectations of its promoters are realised, will yield a dividend of 4 or 5 per cent. upon the outlay.

Fatality at the Prestwich Lunatic Asylum.

An unfortunate and happily unusual occurrence took place last week at this asylum. After some altercation with an attendant one of the male patients became very violent, and in the struggle which ensued a table fell upon him and caused such injuries as to result in death. At the coroner's inquiry the attendant was acquitted of blame.

Municipal Sanitary Work.

Our local parliament continues to direct its attention to insanitary districts of the town, and at the last council meeting two more smaller blocks of property were condemned on the certificate of the medical officer of health—one area in Hulme, containing nearly 7000 square yards, and another somewhat larger area in Ancoats. At the same meeting the Public Health Acts Amendment Act of 1890 and the Infectious Diseases Prevention Act, 1890, were adopted. This latter will give increased powers in dealing with infectious diseases, premises, &c. With all our powers and appliances, it would seem that we make but little real progress in the diminution of scarlet fever, typhoid fever, and diphtheria. During the last month of 1890 something like a hundred new cases of scarlet fever, forty of diphtheria, and nearly fifty cases of typhoid fever were reported. More than a thousand cases have been sent into the Corporation Fever Hospital at Monsall since June last, and this is only a small part of the total number reported.

Manchester, Feb. 11th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Royal Infirmary.

THE annual meeting of the Newcastle Royal Infirmary has been held, and the report gives evidence of a very large amount of work having been done in this great institution during the past year. The number of in-patients treated was 3328, which was more by 208 than that received in the previous year. The number of deaths had been 277, giving a death-rate of 8·32 per cent.; of these, however, 53 died within twenty-four hours of their admission, and may be regarded as moribund, and beyond the reach of medical skill,

when they were admitted. Deducting these, the number of deaths may be stated as 224, giving a death-rate of 6·73 per cent. The number of casuals and out-patients had been 13,216, giving an amount of relief of incalculable value. The number of eye cases had been 1120; the dental cases were 808. In regard to the recent application of the Koch treatment, it was stated that in the lupus cases a marked improvement took place from the very first, and it is fully expected, by a continuation of the remedy, that health will be restored. As regards the two cases of phthisis, no decided opinion can at present be formed, a sufficient period not having elapsed to say what the result may be. The Mayor, in speaking to the adoption of the reports, said that one of the most gratifying things in the finances was the large amount subscribed by working men, amounting as it did to £3201. I mentioned in former notes the completion of the beautiful little chapel, St. Luke's, in the infirmary. It was stated at the meeting that a lady had presented an organ for the chapel.

Newcastle Health Society.

The inaugural lecture of the new Society (established on similar lines to that in Edinburgh and other large centres) was delivered on Saturday last by Dr. William Murray of this city, to a very large and appreciative audience. Dr. Murray's subject was Eating and Drinking, and he treated it in a masterly yet attractive manner, showing the errors of various classes of the community as to diet, the injury to health from neglect of physiological laws, and the baneful effects of bad customs as to quality and quantity of food for the various ages. Dr. Murray also very clearly showed that with proper organisation an amount could be saved to the working man's household equivalent to an important rise in wages, yet this aspect of economy is rarely taken up by reformers. The course which has been so well commenced is to be followed by various medical men and others distinguished in their various departments. The Health Society supplies a want, and supplies it well, for the north of England, with its dense population.

The Children's Hospital (Fleming Memorial), Newcastle.

The annual meeting of the Fleming Memorial Children's Hospital has been held, and the report stated that the in-patients had been 201 and the out-patients 3390, showing a considerable increase in both departments. The committee hoped that on the receipt of a munificent bequest of the late Mr. Fleming, the founder of the hospital, who had also left £25,000 to it, they would be in a position to open all the beds in the various wards.

Alnwick.

The Duke of Northumberland has offered the local board of health the sum of £1000 to help them in carrying out some sewage works necessary for the town of Alnwick, also land for purification works near the town.

Newcastle-on-Tyne, Feb. 10th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Prevalence of Infectious Diseases in Edinburgh.

AT the Town Council meeting last week the Convener of the Public Health Committee drew attention to the fact that the City Hospital was more than full. There were in the hands of the towns no fewer than 286 people affected with fever—99 being cases of typhoid fever, 11 of diphtheria, 111 of scarlet fever, 6 of measles, 10 of whooping-cough, 12 of erysipelas, and 13 in quarantine. From this it appeared that their hospital accommodation, while sufficient for ordinary occasions, was insufficient for a large epidemic. Although the intimations of infectious disease seldom exceeded twelve daily, from Jan. 24th the intimations had gone up considerably. So many of the cases in hospital were typhoid fever cases, which required very careful nursing, that they were in straits to provide accommodation, not only for the patients but for the nursing staff. Questions were asked whether the officials of the Public Health Committee had traced the source of an outbreak of scarlet fever in a district of the city, and when it was intimated that they had not succeeded in doing so it was stated there was a complaint that the matter was not being investigated as carefully as it might be. Since the meeting, a notice has appeared that the milk supply from a dairy has been stopped. Open criticism seems to have a stimulating effect on the official mind.

Demonstrations of Sick-room Cookery.

A short series of demonstrations of sick-room cookery have been given during the past few weeks in the Edinburgh Royal Infirmary for the instruction of medical students, similar to those given on former occasions. The demonstrations are given by ladies from the Edinburgh School of Cookery, and their value to the medical student is apparent.

Health of Edinburgh.

The mortality last week was 91, and the death-rate 17 per 1000. Diseases of the chest were accountable for 50 of these, and zymotic diseases for 9; of these, 2 were due to typhoid fever, 2 to diphtheria, 1 to measles, and 4 to whooping-cough. The intimations for the week comprised 19 cases of typhoid fever, 8 of diphtheria, 63 of scarlatina, and 9 of measles. In Leith the death-rate was at the rate of 18 per 1000.

The Edinburgh Medico-Chirurgical Society.

At the meeting of this Society last week Dr. J. Berry Haycraft gave an able paper with demonstrations of the cardio-pneumatic movements. He first dealt with the views of Voit, the discoverer of these movements, and gave a demonstration of the method he had used; then he considered and demonstrated the opinions and experiments of Ceradini and Landois, and from these went on to detail his personal observations, and showed that the movements are really inverted cardiograms, and due to the movements of the heart upon the lungs; that they occur equally well in the freely opened chest, but cease when the heart is lifted away from the lungs. The views advanced were illustrated by carefully planned experiments, and by projections of tracings. This was followed by "Notes on a Case of Hereditary Optic Atrophy," by Dr. W. G. Sym.

Royal Infirmary, Perth.

The annual report for the past year shows that the work of the institution had been efficiently carried on, and that all the demands of the sick poor upon its resources were fully and adequately met. The ordinary income amounted to £2487 19*s.*, and the expenditure to £3125 18*s.* 5*d.* During the year £1009 had been received as legacies.

Feb. 10th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal University of Ireland.

A MEETING of the Senate was held last week, when it was decided that henceforth the examination for the diploma for proficiency in the treatment of mental diseases shall be held every year. His Excellency the Marquis of Dufferin and Ava, Chancellor of the University, having offered for competition a gold medal for the best English essay on a subject to be named by the Senate, they have arranged that for 1891 the subject for the essay shall be "Edmund Burke," and for the following year, "Colonies, Ancient and Modern." The following examiners have been appointed:—Chemistry, E. A. Letts; Biology, L. E. Klein; Anatomy, A. E. Birmingham; Materia Medica, F. Quinlan, William Whitla; Medicine, Joseph O'Carroll; Surgery, Thornley Stoker; Midwifery, J. W. Byers, A. J. Smith; Medical Jurisprudence, C. Pearson, M. F. Cox; Ophthalmic Surgery, H. R. Swanzy; Sanitary Science, Sir Charles Cameron.

Royal College of Surgeons.

An election for a member of council, in the room of the late Mr. Corley, will be held on Monday, the 23rd inst. It is expected that there will be two candidates, Messrs. William Frazer and Austin Meldon, each of whom has already served as councillor. On the same day an election of an examiner in law will take place to examine candidates for the diploma in State medicine, granted conjointly by the Royal College of Physicians and Royal College of Surgeons.

Royal Academy of Medicine in Ireland.

The eighth volume of the Transactions of the Academy, that for the Session 1889-90, has been issued. There is in the Medical Section an excellent paper by Dr. Foot on

Morphinism; and in that of Surgery the following among others are of interest—viz., A Successful Case of Batty's Operation, by Mr. J. K. Barton; Supra pubic Lithotomy in relation to the Treatment of Encysted Calculus, by Mr. McArdle; and One Hundred Cataract Extractions, by Mr. Swanzy. In the Section of Obstetrics Dr. Macan describes a case of successful Cæsarean Section. In the Section of Pathology Professor Bennett has a paper on Typical Fractures, which is of great practical value; and Mr. Franks describes a renal calculus where the nucleus was formed by a foreign body, a needle which had been swallowed seventeen years previously. In the same Section there is a short note by Dr. McWeeney on Diphtheritic Micro-organisms; and in the Section of Anatomy and Physiology there is an elaborate paper by Mr. Alec Fraser on Operations on the Brain. The volume is edited as usual by Mr. Thomson.

Artisans' Dwellings in Drogheda.

The necessity for providing improved dwellings for the working classes in this town has engaged the attention of Mr. J. P. Cairnes, J.P., who, anxious to make some practical effort towards supplying this want, has proposed to place a sum of £5000 in the hands of trustees for this purpose. This offer has been made to the Corporation of Drogheda by Mr. Cairnes, who has requested their friendly coöperation, and that body has passed a vote of thanks to him for his generous offer, and have appointed a committee to wait upon him in reference to the matter.

South Dublin Union.

An election for a medical officer to Canal-street Dispensary took place last week to fill the vacancy caused by the death of Dr. J. A. Byrne. Considerable interest was felt in the proceedings, eighteen candidates having forwarded applications for the post, of whom sixteen were in attendance. Dr. Herbert Byrne, son of the late medical officer, however, distanced all competitors and obtained the appointment by a large majority.

Midwives' Registration Bill.

When this Bill comes on for second reading its rejection will be moved by Mr. Macartney, M.P. The chief medical corporations have made arrangements for their representatives to wait as a deputation on the Lord President of the Council with reference to the proposed enactment.

Address to Mr. F. Foster Brady, L.R.C.S.I.

Mr. Brady, since his appointment as medical officer to Carnew Dispensary, co. Wexford, now some four years since, has made many friends, and the occasion of his recent marriage was taken advantage of to show their esteem and regard. Last week he was the recipient of an address and presentation as a token of the kindly feelings towards him which existed in the district in which he practises.

University of Dublin.

On Tuesday, at the spring commencements of the University, the honorary degree of LL.D was conferred upon the Right Hon. A. J. Balfour, M.P., Chief Secretary for Ireland. Mr. Balfour received an enthusiastic reception, and after leaving University Hall delivered a short speech to the undergraduates.

St. Vincent's Hospital.

Dr. A. Smith, ex-assistant physician Rotunda Lying-in Hospital, has been appointed gynæcologist to this hospital, in the room of the late Dr. J. A. Byrne.

Feb. 10th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Drug Treatment of Chorea.

THE drug in contradistinction to the moral and dietary treatment of chorea has up to the present given rise to a vast amount of discussion. It still rests on very debateable ground, some extolling one drug, some another, a clear proof that no one drug is ever found to be universally efficient. Others, again, maintain that drugging in this affection is quite as, if not worse than, useless. The writer recollects being once up for an examination in medicine in which the learned examiner, with decided views, scouted drugging in chorea, and informed his uncomfortable candidate, in the dogmatic tone peculiar to not a few examiners, that when next questioned as to the best treatment of chorea to reply: "Six to eight weeks, combined with peppermint-water thrice daily." Judging, however, by the recorded results obtained in recent years by competent observers in this country and elsewhere in the treatment of chorea by antipyrin and its allies, there would appear to be a consensus of opinion that in the therapeutics of chorea a step has been made in advance. Amongst the observers who have exhibited this drug with success is Dr. Moncorvo. He found, however, that large doses were necessary before any decided effect was produced even in the case of children, and that although when polyuria and nocturnal incontinence existed these were appreciably diminished, they were not entirely suppressed; these and other considerations led him to try exalgine, and from the very first he records that the benefit which attended its administration was decidedly encouraging. The polyuria and nocturnal incontinence, which the antipyrin had only served to check, were completely arrested by exalgine. Again, while the effective dose of antipyrin was found to be three grammes a day that of exalgine only amounted to thirty centigrammes. Moreover, Dr. Moncorvo says that when treated by antipyrin the average duration of the disease is one month, while in those cases in which he has tried exalgine a cure has been effected under three weeks. He finds that the drug is well borne by children, and has never observed any unpleasant effect follow its use. Seeing how common and distressing an affection chorea is, and the uncertainty, if not impotence, of therapeutic efforts hitherto, the observations of Dr. Moncorvo are worthy of note, and his practice of more extended trial.

Intestinal Antisepsis and Drug Tolerance.

Every observer has from time to time remarked the intolerance manifested against some drugs, the administration of which, while absolutely necessary for the amelioration or cure of the patient's affection, is rendered difficult owing to this intolerant idiosyncrasy. M. Féré finds that, by practising intestinal antisepsis by means of such substances as naphthol, patients who were intolerant of small doses of bromide of potassium or borax in epilepsy will, when naphthol and salicylate of bismuth are exhibited at the same time, bear perfectly well as much as seventeen grammes a day of bromide without any inconvenience. The eczema and psoriasis which sometimes appear in the train of borax will also disappear if the intestines be rendered antiseptic. M. Féré adds that it is quite possible that intestinal antisepsis may be found to check intolerance of drugs other than those directed against epilepsy.

Dogs' Serum in Tuberculosis.

At a recent meeting of the Biological Society, M. Charles Richet recorded the results so far obtained by the injection of the prepared serum of dogs' blood in cases of tuberculosis. In one case, where the injections were practised regularly since the beginning of last December, the patient had gained in weight as much as four kilogrammes and a half. In another, whose condition was so pronounced that he suffered from bedsores, a marked amelioration was reported; and in a case of laryngeal phthisis the progressive improvement in the ulcerations was plainly visible. M. Richet does not go so far as to assert that these improvements may be permanent, but he has demonstrated at least the main effects of the injections made with this prepared serum. The injections are made at first every third day, then every second, the amount injected being two centigrammes a day.

The Obstetric Forceps and Paralysis.

In the English works on obstetric medicine within my reach I cannot find that paralysis of the upper extremities, following the use of the forceps and the performance of other obstetric operations, is duly insisted upon. That it is by no means uncommon is evidenced by the fact that M. Comby reported three cases at the last meeting of the Hospitals Medical Society. In the case of the forceps, the paralysis is brought about by undue stretching of the brachial plexus when considerable traction is used. In cases of contracted pelvis it may also follow version or violent traction on the shoulders with finger or crochet. In many of the recorded cases the paralysis was permanent; in others faradisation and galvanism were of benefit. In two of the three cases seen by M. Comby, he believed the prognosis was good, but in the third he did not think a cure possible.

Paris, Feb. 10th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Diagnosis of Bovine Tuberculosis.

THE German Imperial Office of Health is testing the value of Koch's fluid as a means of diagnosing tuberculosis in cattle. The result of the preliminary experiments was favourable.

Mikulicz on Koch's Method.

Professor Mikulicz of Breslau declares that the hope of obtaining brilliant results by Koch's method has not been fulfilled. This is due, however, he adds, solely to the circumstance that in their first enthusiasm people hoped too much, for all that Koch said in his first publication is still valid. Mikulicz admits the dangers pointed out by Virchow, but hopes to diminish them by surgical treatment.

Virchow's Answer to Professor Neisser.

With reference to Professor Neisser of Breslau, who wrote that Virchow's observations of the effect of Koch's fluid had been made on cases in which the injections had not been made for therapeutic reasons, "but in order to study the effects of the fluid at the autopsy of patients who would have died at any rate," Virchow repeats that he chose by preference cases in which the bad symptoms had developed after the injections.

The Free Association of Berlin Surgeons.

The Free Association of Berlin Surgeons discussed the treatment of lupus by Koch's method yesterday evening. Professor Sonnenberg showed a female patient who had been almost entirely cured of extensive lupus. She has been treated by Koch's method since October. She had been treated without success before by other methods. Professor Hahn said that he had found it advantageous to puncture the parts affected by lupus during the administration of Koch's fluid. Dr. James Israel reported a case of indubitable lupus, in which there was no local reaction whatever. Dr. Lindner of the Augusta Hospital has in most cases observed no reaction, either local or general, or hardly any after the injection for lupus, but has nevertheless obtained favourable results. Professor Bardeleben declared it a great mistake to pronounce a final opinion upon Koch's method yet. Dr. Koerte of the Hospital am Urban stated that in most of his cases the morbid phenomena altered only a little under Koch's treatment, but he too has seen isolated cases of improvement. Dr. Bartels raised the question whether general miliary tuberculosis had been observed in patients with surgical tuberculosis after Koch's injections. None of the surgeons present had seen any such effect. Professor Bardeleben said there was no doubt that general tuberculosis and tuberculous meningitis might set in during the application of Koch's method, but it was hard to say whether they were due to the injections. The argument *post hoc ergo propter hoc* might easily mislead. If, for example, one resected a tuberculous joint in children, the operation was sometimes followed by general miliary tuberculosis. It was natural to suppose that tubercular particles got into the bloodvessels during the operation. It was found, however, that general tuberculosis sometimes broke out in such children before the operation. If the miliary tuberculosis had followed the operation in these cases, it would have been erroneously attributed to it.

The Cremation Society.

The Cremation Society held a general meeting here on the 4th instant. The number of its members is considerably above a thousand. Professor Freire of Rio Janeiro lectured on the danger of burying persons who die of yellow fever in South America, and declared the introduction of cremation to be the only preventive of epidemics there. The income of the Society last year was over 19,000 marks—i.e., shillings; its expenditure over 17,000.

Hermann von Helmholtz.

Helmholtz will complete his seventieth year on Aug. 31st next, and preparations are already being made to do him honour on that occasion. Contributions may be sent to Mendelssohn and Co. here before the end of April.

Death-rates of the Week ending Jan. 24th.

Aix-la-Chapelle, 23·7 per 1000; Altona, 30·8; Barmen, 16·3; Berlin, 17·2; Bremen, 18·2; Breslau, 24·9; Chemnitz, 25·6; Cologne, 25·7; Dantzic, 33; Dresden, 16; Düsseldorf, 16; Elberfeld, 23·1; Frankfort, 24·5; Hamburg, 18·4; Hanover, 20·1; Königsberg, 26·7; Krefeld, 28·9; Leipsic, 18·8; Munich, 22·6; Nürnberg, 21·8; Stettin, 28·2; Strasburg, 30; Stuttgart, 15·5.

The further application of Koch's fluid in the Warsaw hospitals has been officially forbidden.

Dr. Julius Lazarus has been appointed head of the medical department of the Jewish hospital here.

Berlin, Feb. 10th.

THE SERVICES.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Wm. Duncan, M.D., F.R.C.S. Eng., having resigned his Volunteer appointment, ceases to be an Officer of the Army Medical Reserve of Officers (dated Feb. 12th, 1891); Acting Surgeon John Hubert Griffin, 16th Middlesex Rifle Volunteer Corps, to be Surgeon, ranking as Captain (dated Feb. 11th, 1891).

YEOMANRY CAVALRY.—Middlesex (Duke of Cambridge's Hussars): William Duncan, M.D., to be Surgeon (dated Jan. 25th, 1891).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Surgeons: Wm. Bett to the *Stork* (dated Feb. 11th, 1891); Octavius S. Fisher to the Plymouth Division Royal Marines (dated Feb. 11th, 1891); George A. Waters, M.D., to the *Boomerang;* Walter J. Bearblock to the *Hearty;* Thomas Austin to the *Karrakatta;* and George M'Shane to the *Seagull* (undated).

VOLUNTEER CORPS.—*Infantry:* Mersey Brigade: Surgeon and Surgeon Major T. M. Wills, 4th Volunteer Battalion, the King's (Liverpool Regiment), to be Brigade Surgeon, ranking as Lieutenant-Colonel (dated Feb. 11th, 1891).—*Rifle:* 21st Middlesex (the Finsbury): Acting Surgeon E. W. F. Stiven, M.D., to be Surgeon (dated Feb. 7th, 1891).—1st Tower Hamlets (the Tower Hamlets Rifle Volunteer Brigade): Geo. Gunnis Ferguson, M.B., to be Acting Surgeon (dated Feb. 7th, 1891).

Obituary.

FREDERICK SIMMS, M.B. LOND., M.R.C.P.

WE regret to announce the death of Dr. Simms, of Mandeville street, Manchester-square, and Yew Cottage, Twickenham, which occurred unexpectedly on Friday, Feb. 6th, at the age of fifty-six. He was seized with apoplexy, from which he never rallied, and passed away in a few hours. For some time he had been in delicate health, but nothing to make his friends in any way prepared for so sudden a termination to the life so dear to them. Dr. Simms was born at Greenwich, his father being a civil engineer who had attained eminence in his profession, and to whom his son was tenderly attached, retaining to the last a most profound reverence for all that pertained to his father's memory. He was educated at the Rochester Grammar School, and subsequently at King's College, London. Everything connected with the sea possessed a great charm for him, and shortly after graduating he had the opportunity of indulging this taste, in conjunction with his medical duties, by taking charge of troops to India. Subsequently, Dr. Simms settled at Twickenham, where he engaged in general practice for eight years, when failing health induced him to relinquish the work, to the great regret of his patients, amongst whom he was deservedly popular. After this he commenced a consulting practice in London, applying himself with special interest to dermatology. He was appointed consulting physician to the Twickenham Provident Dispensary and John the Baptist Hospital, where he enjoyed the esteem and respect of his colleagues. By his generous, courteous, and loveable disposition, Dr. Simms won the hearts of all with whom he came in contact; his high sense of justice and strict adherence to professional etiquette were very noticeable traits in his character. The good exercised by the quiet, kindly influence of such men is deep and wide-spreading, and in many places, especially in Twickenham, where he lived so long, the memory of this true Christian gentleman, "who wore the white flower of a blameless

life," will be long cherished. Dr. Simms was twice married; he leaves a widow and several sons and daughters. His only published work with which we are acquainted is "A Winter in Paris."

CHARLES RICHARD CROSSLEY, M.R.C.S., J.P.

LEICESTER and its vicinity have suffered a severe loss by the death of this esteemed surgeon, which took place on Jan. 9th last, after a prolonged and painful illness. Mr. Crossley occupied the post of surgeon to the Leicester Infirmary for a quarter of a century, and in the discharge of the duties of that office displayed remarkable dexterity, conjoined with sound judgment. In his private practice the confidence of his patients was secured by the firmness and transparent honesty of his advice, whilst his sympathy with the suffering readily obtained for him the position of family friend. Mr. Crossley took a great interest in political and municipal affairs, and in the exercise of his magisterial functions he commanded the high respect of his colleagues on the bench. He died at the age of sixty-six, leaving a widow, one daughter, and three sons, two of whom were his partners in practice. A notice in a local newspaper of the decease of Mr. Crossley closes with these words:—"We cannot in our sadness forget that Charles Richard Crossley, whose name will always be uttered by his fellow townsmen with respectful pride, was one of those who leave behind them examples of devotion to duty, of love for noble aims, and of manly goodness which the world must be better for striving to follow."

PROFESSOR GAETANO LEOPARDI.

THIS able consultant and estimable citizen died at Florence on the night of Jan. 17th, leaving a blank not easily to be filled in the roll of Tuscan physicians.

Gaetano Leopardi was born at Jesi on Sept. 17th, 1830, and was early marked out by intellectual gifts and moral predilection for the medical career. Like all his contemporaries, with few exceptions, he took an enthusiastic part in the struggle for national unity and independence; and if in his case, as in that of others, academic study had for a time to be postponed to patriotic service, the loss to special education was made up for by the moulding of character in the ennobling school of generous aspiration and self-sacrificing discipline. He entered heart and soul into committee work among his fellow-students for the organisation of volunteer forces, and when that was done he served fearlessly in the ranks against the common enemy. He suffered exile with others of his young compatriots, till at length the events of 1859 and 1860 made Italy, with the exception of Venetia and the States of the Church, mistress in her own household.

Leopardi resumed, with characteristic ardour, the studies so frequently interrupted, and by sedulous work at the schools of Pisa and Florence made ample reparation for the time and opportunity he had lost. He graduated with distinction in 1860, and on May 23rd of that year was nominated assistant to the celebrated Florentine consultant and teacher, Professor Cipriani. Florence, always the city of his predilection, had now become his home, and he rose rapidly in the esteem of his colleagues and in the confidence of an ever-widening *clientèle*. Once and again, however, he allowed his patriotic sympathies to carry him outside the professional pathway, and in 1866 and in 1867 he aided with all the means at his command the movement which led in the former year to the cession of Venetia, and in the latter to the temporary defeat of Garibaldi at Mentana. But when three short years thereafter the flag of united Italy was hoisted in the Capitol, no Italian reverted with greater devotion to special work than Gaetano Leopardi. Academic promotion now came to him rapidly. In 1878 he had risen to be clinical professor and lecturer on Pathology in the Florentine School, and in the following year accepted the post of Professor of Clinical and Pathological Medicine in the University of Cagliari in the island of Sardinia. In 1882 he was transferred to a Professorship in the same subjects in the University of Siena; but Florence once more asserted her old charm for him, and he returned to her school to fill the post of "Extraordinary Professor of Special Pathology, Medical and Propædeutic." This chair, in his hands, became extremely attractive, and he discharged its duties with progressively increasing acceptance, in spite of the calls of a widely extended practice, which summoned him in consultation to all parts of Italy, especially to Milan, Rome, and Naples. His power of inspiring confidence at the bedside was by general admission remarkable, assisted as it was by the "light address," the "*hilaris vultus*" of Celsus, and by the impression he conveyed of being something more than a practitioner—an illustration, in fact, of the memorable saying that "a great physician is a great artist." Benevolence, shown in a thousand distinctive traits, was another note of his character which the patient intuitively felt, and whether in the ward of the hospital, the dwelling of the poor, or the mansion of the grandee he exemplified the beautiful Indian proverb: "Is a man ill? The physician is his father. Does he recover? The physician is his friend. Is he convalescent and fully restored to health? The physician is his guardian." In keeping with his great popularity as a professional man and citizen, his funeral was one of the most impressive ever witnessed in Florence—neither Puccinotti, nor Bufalini, nor Cipriani having been followed to the grave by a more numerous or a more distinguished train of mourners. Though an advanced Liberal in politics and a non-Catholic in religion, men of all parties and creeds joined in paying the last tribute to his memory, and, round his grave in the Protestant cemetery of the Allori, were represented by their several spokesmen in *oraisons funèbres* inspired by a common sympathy as by a common sense of loss.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council held on Thursday last the minutes of the quarterly Council on the 8th ult. were read and confirmed. The minutes of the Museum Committee on the 6th inst., as the report from that Committee, were also read and confirmed. A further report was read from the Committee on the Extension of the College premises, adopted, and entered on the minutes.

A report was read from the Laboratories Committee and adopted. There are now fifteen Fellows or Members of the College engaged in various researches in the new laboratories.

A letter of the 6th inst. from Mr. Arthur Milman, Registrar of the University of London, forwarding by direction of the Senate copies of the Revised Scheme for the Reconstitution of the University, upon the basis of which the Senate propose to invite Convocation to concur in applying for a New Charter, was read. The scheme was approved and entered on the minutes.

A letter was read, dated the 11th inst., from Mr. Ernest J. Wilde, with reference to the "meetings of Fellows," enclosing an opinion by the Attorney-General and Mr. Paget, to the effect that the Council have the power to summon meetings of the Fellows independently of the Members. We propose to give the text of this opinion in the next issue of THE LANCET.

Dr. Liveing reported the proceedings of the Royal College of Physicians with respect to affairs concerning the two Colleges.

Mr. Hill moved and Mr. Macnamara seconded the following resolution, which was carried—"That members of the Council who desire to nominate Members of the College of twenty years' standing for election to the Fellowship by ballot in April shall submit such names at the meeting of the Council in December in each year, and that such names be circulated among the members of the Council before the meeting in January."

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen, having passed the necessary examinations, have been admitted Diplomates in Public Health:—

Braga, Joao Francisco, L.S.A., King's College and Edinburgh.
Brodie, William Haig, M.D. Edin., Edinburgh University.
Cropley, Henry, F.R.C.S. Eng., London Hospital.
Dyer, Sidney Reginald, M.D. Brux., L.R.C.P. Lond., M.R.C.S., Middlesex Hospital.
Field, Oliver, M.D. Edin., L.R.C.P. Lond., M.R.C.S., Edinburgh University.
Firth, Robert Hammell, F.R.C.S. Eng., University College Hospital.
Hart, George Henry, M.R.C.S., L.R.C.P. Edin., Birmingham.
Haslip George Ernest, M.D. Brux., L.R.C.P. Lond., M.R.C.S., London Hospital.

Hichens, Frank, M.D. Lond., M.R.C.S., London Hospital.
Holroyde, John, M.R.C.S., London Hospital.
Hussey, Edward, M.D. Durh., L.R.C.P. & S. Edin., Sheffield, Edinburgh, and Charing-cross Hospitals.
Kenwood, Harry Richard, M.B. Edin., L.R.C.P. Lond., London Hospital.
McGachen, Frederic Wm. Dobson, L.F.P.S. Glasg., London Hospital.
Mallins, Clement, M.D. Dub., Dublin.
Norton, John, M.D. Durh., M.R.C.S., Westminster Hospital.
Roughton, Walter, L.R.C.P. Lond., M.R.C.S., St. Bartholomew's Hospital.
Stirling, Alexander Williamson, M.D. Edin., Edinburgh and University College Hospital.
Tebb, Wm. Scott, M.D. Camb., L.R.C.P. Lond., M.R.C.S., St. Thomas's Aospital and Cambridge.
Wilde, Leonard, M.D. Durh., L.R.C.P. Lond., M.R.C.S., St. Thomas's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having passed the necessary examinations, and having attained the legal age (twenty-five), was at an ordinary meeting of the Council on the 12th inst., admitted a Fellow of the College:—

Deanesly, Edward, M.D. Lond., University College Hospital. Diploma of Member dated June 24th, 1887.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed the First Examination in January last in the subjects indicated:—

Chemistry.—D. Berne, R. B. Greaves, E. Grange, T. L. Johnston.
Materia Medica, Botany, and Pharmacy.—E. Dodds, T. H. P. Peers.
Materia Medica and Botany.—K. M. Hunter, F. K. Rider.
Pharmacy.—F. R. Rouse.

The following candidates passed the Second Examination:

Anatomy and Physiology.—W. Ashby, G. H. Baird, G. W. Brabyn, E. S. Chilcott, S. A. Clarke, T. S. Collin, F. A. Cregeen, A. B. Franey, A. H. Grace, G. Higginson, H. Howells, A. S. F. Hudson, W. A. King, A. E. Marwood, S. R. Merry, J. C. Netherton, C. St. H. Robinson, J. D. Seller, J. R. Shotton, J. Stott, R. W. F. Welch.
Anatomy.—C. Bayley, G. E. Douglas.
Physiology.—A. Baldwin, H. C. Venis.
Surgery.—T. H. Adams, W. L. W. Buss, R. A. Earle, E. J. Finch, R. A. Irvine, A. E. Mayner, B. F. Parish, G. J. Rutherford, S. C. Smith, J. D. H. Smyth, G. R. F. Stilwell, J. F. Twist, E. B. Wrench.
Medicine, Forensic Medicine, and Midwifery.—C. A. Beck, L. J. Minter, R. B. Morris, G. Wilkinson.
Medicine and Midwifery.—G. C. W. Williams, E. H. Willock.
Medicine.—P. G. Laver.
Forensic Medicine.—H. C. Coopland.

To Messrs. Adams, Beck, Buss, Finch, Irvine, Morris, and Wilkinson were granted the diploma of the Society, having passed in all the subjects required for registration.

UNIVERSITY OF DUBLIN.—The following degrees have been conferred by the Vice-Chancellor:—

Bachelor in Surgery.—Percival Cecil Ryan.
Bachelor in Medicine, Surgery, and Obstetrics.—George Percival Adamson, Michael Joseph Bulger, George Cole-Baker, Francis William Dobbin, Robert Marshal Going, John George Moyles, John Ryan, Terence Woulfe-Flanagan.
Doctor in Medicine.—Charles Ecroyd McNaught, Henry McQuade, William Andrews Morton, John Ryan, Perceval Cecil Hardinge Ryan.

CONJOINT SCHEME OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, IRELAND.—The following have passed their Final Examination:—

J. A. Burland, T. G. Dillon, A. N. Heron, A. H. Jacob, John Mackenzie, G. H. Moorhead, G. N. D. Oakes, Joshua Pim.
Passed in Medicine.—M. F. Cahill, Harry Cullinan, J. C. Ryan.
Passed in Surgery.—H. Cullinan, Michael G. Dobbyn, W. L. Fisher, J. C. Ryan, J. A. Thompson.
Passed in Midwifery, &c.—M. F. Cahill, M. G. Dobbyn, W. Smartt.

ROYAL STATISTICAL SOCIETY.—At the ordinary meeting of the Society, to be held on Tuesday next in the lecture theatre of the Museum of Practical Geology, Jermyn-street, at 7.45 P.M., Dr. Arthur Newsholme, D.P.H., will read a paper on the Vital Statistics of Artisans' Dwellings.

WIGAN MEDICAL SOCIETY.—The following office-bearers have been elected for 1891:—President: C. M. Brady, Esq., L.R.C.S.I. Committee: Messrs. M. Benson, G. H. Monks, jun., W. C. Barnish, J. B. Stuart, J. A. Marsden, and N. Hannah. Treasurer: G. H. Monks, jun., L.R.C.P. & S. Ed. Secretary: Wm. Berry, F.R.C.S.I.

THOMPSON MEMORIAL INSTITUTION FOR INCURABLES, LISBURN.—The annual report for 1890 shows that at the end of the previous year there were fifty-four patients in the home, and that eleven had since been admitted. Only six deaths had occurred during the twelve months. The death of Dr. H. S. Ferguson, one of the trustees, is recorded with regret. The general statement of accounts shows a balance in hand of £628 5*s.*, and the investments (including £334 2*s.* 8*d*, at interest at banker's) now amounted to £54 308 16*s.* 1*d.*

ST. THOMAS'S HOSPITAL.—We are informed by the authorities that at a Court of Governors of the hospital, held on the 4th inst., Dr. Felix Semon, Assistant Physician for Diseases of the Throat, was granted the title of Physician.

SEAMEN'S HOSPITAL SOCIETY.—At the meeting of the Society to be held at the P. & O. Company's offices on the 17th inst., Sir Thomas Sutherland, K.C.M.G., M.P., Lord Brassey, the Danish Minister, and the Austrian Consul-General are expected to be present.

SUICIDE OF A MEDICAL PRACTITIONER.—Mr. A. Braxton Hicks held an inquest on Feb. 5th on the body of Edmund Wollaston Parkinson, M.R.C.S., L.R.C.P. Edin., aged forty-six, who committed suicide by taking prussic acid on Jan. 31st, at the residence of Mr. Boyd, L.S.A., of Lavender-hill. On Saturday Mr. Boyd discovered the deceased lying on the couch, pulseless and breathing heavily, and a bottle which had contained prussic acid was found near the couch.

THE OLDHAM MEDICAL PRACTITIONERS AND DR. NIVEN.—The outcome of a recent meeting of the members of the profession in this town, who deputed Dr. Niven to visit Berlin for the purpose of investigating, on the spot, Professor Koch's discovery, is the offering by the subscribers to the Berlin fund, for Dr. Niven's acceptance, a cheque for £70, to defray the expenses of his visit, at the same time conveying to him their thanks for going to Berlin on their behalf, as well as for the information he has given them on the whole subject of tuberculosis, and the ready assistance he has rendered in adopting Koch's treatment.

ASSOCIATION OF PUBLIC SANITARY INSPECTORS.—Dr. B. W. Richardson, the president, occupied the chair at the eighth annual dinner of this Association, held on Saturday evening at the Holborn Restaurant. A large assembly attended. The chairman, in a vigorous speech, proposed the toast of the evening, "Success to the Association of Public Sanitary Inspectors." He said it was to prevent avoidable causes of death that the Association laboured. With them everything was from the first a question of dealing with primary causes of disease and taking them away. Other toasts followed, and the festival terminated.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—The sixty-third annual report, just circulated, is of a very satisfactory character. The work accomplished during the past year has been attended with marked success. The rebuilding of the front, or fourth side (now the only remains of the old building), has become a pressing necessity. The estimated cost of the reconstruction, with other necessary improvements, will be about £20,000. A special fund for this purpose was opened in January, 1890, and £2291 16*s.* 5*d.* has been received. It is proposed to hold a festival dinner in the approaching spring on behalf of the hospital, and the committee invite the coöperation of subscribers and friends of the charity to render the festival a success. During the year the in-patients numbered 2138, the out-patients 17,263, and casualties 10,894.

GUY'S HOSPITAL.—We learn that the Court of Governors of Guy's Hospital have acceded to the request of the staff for increased accommodation in the Medical School. The existing carpenters' shops within the hospital grounds had fallen into such a dilapidated condition that it was necessary either at once to undertake very costly repairs or to rebuild them, and the latter alternative being preferred, the Court decided to combine with it a considerable extension of the hospital and school. The proposed buildings comprise a dental department consisting of a conservation room 110ft. long and 24ft. wide, with space for fifty operating chairs. The room, which has a northern aspect, will be constructed upon the model of the existing conservation room, which, though erected no longer ago than 1889, is already too small for the needs of the rapidly increasing dental school. Beneath the conservation room will be the dental laboratory, measuring 65ft. by 24ft., in which thirty students can work at one time; and beneath the laboratory will be the waiting rooms for male and female patients, with the necessary conveniences. The total cost, inclusive of the hospital workshops, is estimated at £10,000, and the architects are Messrs. Woodd and Ainslie, of 35, New Bond-street, who lately designed the residential college.

VACCINATION GRANT. — Mr. Beaven Rake, M.R.C.S. Eng. and L.S.A., has, for the ninth consecutive time, received the Government grant for efficient vaccination in the No. 2 District of the Fordingbridge Union.

MIDWIVES' REGISTRATION BILL.—The following resolution has been passed by the Board of the Medical Department of the Yorkshire College:—"The Board considers that there is great need for improvement in the education of midwives, and recognises the necessity for legislation in order to provide for their efficient training, their examination, registration, and subsequent supervision. It does not, however, approve of the Midwives' Registration Bill now before Parliament, which it believes to be imperfect in detail; and is of opinion that it would be inexpedient to pass it in its present form."

ROYAL METEOROLOGICAL SOCIETY.—At the ordinary meeting of the Society, to be held at 25, Great George-street, Westminster, on the 18th inst., at 7 P.M., the following papers will be read: "The Great Frost of 1890–1891," by Charles Harding, F.R.Met.Soc.; "On the Variations of the Rainfall at Cherrapoonjee in the Khasi Hills, Assam," by H. F. Blanford, F.R.S.; "The Problem of Probable Error as Applied to Meteorology," by T. W. Backhouse. The twelfth annual exhibition of meteorological instruments will be held at the same rooms from March 3rd to 19th.

CITY OF LONDON LYING-IN HOSPITAL.—Mr. Charles Gordon presided at the 140th annual meeting of this hospital, which was held on Wednesday at the institution, City-road. The report, which was adopted, showed that 423 poor women had been assisted in their hour of trial during the past year. In addition, 1331 mothers had been attended at their own homes by the medical staff. Out of the whole number, only four women had died. In the course of the speeches delivered by the various governors present, gratifying reference was made to the continued light mortality, the medical officer attributing it to the excellence of the sanitary arrangements at the hospital.

FRENCH HOSPITAL AND DISPENSARY.—The twenty-third annual dinner in aid of the funds of this charity took place at the Hôtel Métropole on Saturday evening last, the chair being taken by his Excellency the French Ambassador, supported by the Lord Mayor and the Sheriffs of London, the Italian Ambassador, the Persian Minister, and representatives of the diplomatic corps of a large number of foreign countries, being present, the total number of guests being little short of 250. The report, read by the honorary secretary, Mr. Ruffer, showed that during the past year the institution has afforded relief to 14,873 out-patients and to 496 in-patients, belonging to no less than twenty different nationalities, for although French in name the institution prides itself upon being essentially of a cosmopolitan character. Subscriptions were promised during the evening amounting to nearly £2500. The usual toasts were drank, musical interludes being provided under the able direction of Cavaliere Tito Mattei, with the gratuitous assistance of Mdlle. Trebelli, Mr. Orlando Harley, and Mdlle. de Bono. The committee and the assistant secretary, Mr. F. Sorel, are to be congratulated upon the success of the evening, which surpassed all its predecessors.

ST. MARTIN'S-IN-THE-FIELDS FREE PUBLIC LIBRARY. A large and influential assembly met in the reference room of the library on the 12th inst. on the occasion of the opening of this institution by the Right Hon. W. E. Gladstone. Mr. Gladstone was received by the Commissioners, and after signing the visitors book was presented with a very handsome, inscribed silver key. The Rev. John F. Kitto, the Vicar, presented a catalogue of the library to Mr. Gladstone. In declaring the library open, the right hon. gentleman referred specially to Mr. Ewart, the author of the Public Libraries Act. During the last year over seventy new libraries had been opened, and the time was approaching when they would be strewn over the land in cities and in villages, and thus provide means of healthy recreation for the youth of the country. A vote of thanks to Mr. Gladstone was proposed by the Right Hon. W. H. Smith, M.P., member for the borough, and seconded by the Right Hon. Lord Kinnaird, senior church warden of the parish, and carried with acclamation.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on February 10th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	237	50	1	48	2	338	442
North-Western Hospital	250	30*	..	9	..	289	445
Western ,,	160	24	..	13	1	198	224
South-Western ,,	158	14	..	5	1	178	340
South-Eastern ,,	196	15	..	30	4*	245	462
Northern ,,	276	15	..	23	..	314	480
Gore Farm ,,	9	..	..	..	..	9	300
Totals	1286	148	1	128	8	1571	2691

* Infants with mothers.

MEDICAL NOTES IN PARLIAMENT.

The Indian Hospital Corps.

IN the House of Commons on Monday evening Sir W. Foster asked the Under-Secretary of State for India whether it was the case that the men of the Indian Hospital Corps and bearer companies in war time received less rations than the Sepoy; were allowed only 10 lb. weight of kit against 33 lb. allowed to the Sepoy; were entirely unarmed when in the field; and were rewarded only by a bronze medal, while the Sepoy received a silver one; and whether anything could be done to remedy these conditions.—Sir J. Gorst: The statements in the question are substantially correct. The arrangements referred to are made by the military authorities in India, and the Secretary of State sees no ground for interfering with them.

New Bills.

A Bill to make better provision for the regulation and control of cemeteries was brought in by Mr. J. W. Sidebotham, and was read a first time.

Mr. Matthews.—A Bill to amend the law relating to factories and workshops.

The Leeward Islands.

On Tuesday Baron H. de Worms, in answer to Sir T. Esmonde, said the medical officer of the public institutions in Dominica had been instructed to inquire into and report upon the progress and treatment of the disease of "yaws" in the Leeward and Windward Islands. During his mission he would be relieved of the duties of his office. The expenses of the inquiry would be paid out of the funds of the several islands in which it would be held. The inquiry had not been instituted in deference to any demand of the medical faculty or people of any of the West Indian colonies. Notice was given in February, 1890, in the Federal Council of the Leeward Islands of a resolution in favour of providing for a portion of the cost of such an inquiry, but the resolution was withdrawn.

THE HOUSE OF LORDS' COMMITTEE ON HOSPITALS.

The Select Committee of the House of Lords on the Metropolitan Hospitals resumed its inquiry on Monday, Lord Sandhurst presiding.

St. George's Hospital.

The first witness examined was Mr. C. L. Todd, the Secretary of St. George's Hospital. In reply to the chairman he stated that his salary amounted to £400. He had held his present office for twenty years. The hospital was founded in 1733. It was practically a free hospital. Of the 4466 patients last year only 840 were admitted on subscribers' letters. They had no paying beds, and no charge was made upon out-patients. The beds numbered 356, and the average number daily occupied was about 335. In the early part of last year they had to close several wards because of the nurses being affected with influenza. If two cases were alike in point of urgency and gravity the case with the subscriber's letter would have the first admission. It would only be in such circumstances that any distinction would be made. As matter of fact the subscribers' or governors' letters were of little use. At one time a provision existed against receiving patients with an income of £10 a year or more. It was thought to be too hard a rule, and was soon withdrawn. Of the patients admitted, 15 per cent. were domestic servants, 6 per cent., however, being out of situations. The masters of servants never paid anything for the treatment of their servants, but they often made contributions to the funds of the hospital afterwards. The hospital was most frequented by the labouring classes. They drew patients from the Battersea, Fulham, Putney, Wandsworth, and other districts. Some wards had accommodation only for twelve beds, others accommodated twenty-three or twenty-five beds. In the new wings the space was 1500 cubic feet per patient, and in some of the other wards the space was only 1000 cubic feet per patient. Some of the doctors would like to see a few beds removed from some of the wards. The matter was under the consideration of the Board. A great many of their patients belonged to the very destitute class. They had often to give relief to wives and families while the husbands were in the hospital. They did this work through the Samaritan Society. Only a very few of their patients could afford to pay for medical treatment. They had often, especially in winter, to send away

people who sought admission to the hospital. Every now and then the house physician or surgeon went round to see if there was a patient fit to go home, in order that room might be found for a new case. He agreed in thinking that intercommunication between the different hospitals might be advantageous. They frequently sent patients on to Westminster and St. Thomas's, having no room for them at St George's; and it often happened that those two hospitals were filled, and the patients came back to St. George's, when they were sent home. The accommodation for the sick poor was certainly deficient in their district. He imagined that the same state of things existed in other districts. No out-patient received assistance till a satisfactory report had been received from the Charity Organisation Society or the chaplain of the hospital. The total expenditure of the hospital last year amounted to £28,316. They derived their income from subscriptions, donations, dividends, legacies, and rents. The buildings were rated at £1584. They had about 1000 governors, all of whom might attend the Weekly Board. It was this Board which, with the aid of a number of committees, managed the institution. Any complaints with reference to nursing were brought before the Nursing Committee. Complaints as to the patients' food came before the witness, and if they were worth reporting he reported them to the Board. Such complaints were very few. Their hospital being very centrally situated, they had constant visits from the governors. It was therefore not difficult to get the opinion of a governor in matters of complaint. They had four or more governors every month whose business it was to go round the wards day or night and make all manner of inquiry and report to the Board. They inquired with special care as to the food of the patients. This inquiry gave patients an opportunity to make complaint if they desired. They called their head nurses in St. George's Hospital not sisters, but head nurses. There had been great improvement in their nursing department during the last ten years. Each nurse had now a separate room; at one time two nurses occupied each room. The head nurses came on duty at seven o'clock in the morning, and were relieved at ten o'clock at night. They had breakfast, lunch, and supper in their own sitting-rooms, and went down for dinner to the nurses' dining-room at four o'clock. They had two hours' leave every day from five to seven or from seven to nine o'clock. Each head nurse had two rooms. The day nurses breakfasted at half-past six o'clock, and were on duty in the wards at seven o'clock. They dined from half-past twelve till one, and were allowed half an hour for tea. They had supper at half-past nine o'clock, and when supper was over their duty for that day ceased. They were off duty every other day from 6.45 till 10 o'clock. They had two weeks' holiday and one day off every month. For a long time they had had no nurses who died from typhoid or diphtheria. The matron had power to suspend, but not to dismiss the nurses. In the event of any of the nurses being taken ill, they were placed in the nurses' sick room, where they were attended by the resident medical officer. They engaged a large number of nurses for special cases. The night nurses went on duty at half-past nine o'clock until nine o'clock the next morning. The hours of the nurses consequently overlapped at the time of day when most work had to be done. Their head nurses remained a long time with them, one nurse having been twenty years and another fourteen years. The ward nurses engaged to stay three years, and often stayed longer. The pupils in the hospital were under the Medical Committee. Any case of misconduct would come before the Board for investigation. The idea of transplanting St. George's in the country had never been seriously considered, although it had been talked of in the neighbourhood.—By Lord Saye and Sele: The mortuary was beneath one of the wards. The present dingy appearance of the hospital was due to contemplated alterations. In all probability the building would be painted this year.—By Lord Cathcart: The surgeons could not obtain any new appliances without the assent of the Board. There was no undue expenditure for novelties in the way of surgical appliances. Naturally they got the best system of treatment they could for the patients. The probability was that if the surgeons asked for a thing they got it.—By Lord Zouche: They did not take cases of scarlet fever. Last year they had fifty-four cases of diphtheria.—By Lord Thring: They were anxious to increase their nursing staff, and only want of accommodation prevented them doing so. At present they were engaged in negotiations for the acquisition of certain houses in which to accommodate nurses.—By the Earl of Lauderdale: The stock held by the hospital amounted to £441,000, and yielded an annual return of £12,642.—By the Chairman: Some years ago, when they were in low water, they sold off stock to the extent of £3000 or £4000 yearly; they appealed to the public several times. In recent years, through the receipt of large legacies, their circumstances had improved, and appeals to the public had not been found necessary. Their collector received 4 per cent. on all money he collected, and 1 per cent. on money sent through the bank.

Mr. H. H. Clutton, senior assistant surgeon to St. Thomas's Hospital, gave evidence as to the out-patient and particularly the surgical out-patient work in connexion with St. Thomas's Hospital. No surgical cases, he said, were refused. He found that surgical cases were not attended by general practitioners, and were sent by them to the hospital. General practitioners appeared to have less facility in treating surgical than medical cases. They had not the appliances for the former. He entirely dissented from the view that so far as surgical cases were concerned the hospitals starved the general practitioners. The hospitals were of advantage to the general practitioners as affording a consulting authority. The cases sent by general practitioners for consultation were very often the best cases for teaching purposes. They usually possessed most scientific interest. He was strongly in favour of the out-patient system from every point of view. The loss of the surgical department would be most serious to general practitioners. He believed there was more outcry against the out-patient system than the facts justified.—By Lord Cathcart: He held very strongly that the large medical schools were better with the hospitals. He thought the present schooling was better than could be got at a large central institution.

Dr. Whipham, dean of the medical school of St. George's Hospital, said there were about 142 students in the school, the fee paid for the whole curriculum being £125. The income of the school amounted to something under £5000, and the expenses to about £2000. The balance went to the lecturers and officers. As to the general question of education, he thought the practical part of the profession must be taught at the hospitals. The scientific part might be better taught at a great central institution where first class appliances would be found. Under the present system the medical school and not the hospital paid the cost of the apparatus.

Dr. Isambard Owen, senior assistant physician at St. George's Hospital, gave evidence as to the remuneration of the lecturers and clinical teachers. At the present time no one in the St. George's Hospital Medical School received more than £100 or less than £30 out of the school. He could not describe their out-patient department as crowded. He did not think there were too many medical schools in London. If it were found desirable to take away certain subjects from the hospitals, he thought they could be taken out of London altogether to the provincial colleges, where he believed they could be better taught than in any crowded institution in London. He thought there would be no difficulty in obtaining first class teachers in those provincial colleges.

The Committee then adjourned.

The Committee met again on Thursday.

Mr. Robert Brass, receiver of St. Thomas's Hospital, attended for the third time, and gave further evidence as to the finances of that institution.

Middlesex Hospital.

Mr. F. C. Melhado, of the Middlesex Hospital, examined by the Earl of Kimberley, said he was secretary and superintendent, with a salary of £300, and board and residence. The hospital was managed by a weekly board, which met every Tuesday, and a board of governors. The institution was founded as long ago as 1745. There were 307 beds, and the daily average of patients was between 250 and 260. Only 200 beds were devoted to medical and surgical cases; that number included 34 beds for cancer cases. Their funds did not permit of all the beds being occupied, although they did not refuse patients when they had vacant beds. Last year the income of the hospital was derived in this fashion: Dividends, £6367; annual subscriptions, £2851; donations, £6538; alms boxes, £234; Hospital Sunday Fund, £2083; Hospital Saturday Fund, £411; rents, £1951; and incidental receipts, £196; total, £20,634. Their average income was about £15,000 or £16,000, last year being a specially good year. Their disbursements last year amounted to £27,117, which included an extraordinary expenditure of £2584. Their average expenditure was about £23,000. The apparent deficit had been met by the legacies. It was their habit to carry all the legacies to capital account, from which they drew as they required. As matter of fact they had no deficit last year, but a considerable surplus. The Middlesex was practically a free hospital. Any sick person might apply for admission. The applicants were seen by one of the admitting officers, who passed them on to the resident medical officer. The cases were selected according to their urgency. Last year they admitted 3109 patients. The sisters received £30 a year, with board and lodging, and they were entitled to pensions after twenty years' service. Three nurses at the present time received pensions. The staff nurses were also entitled to pensions. In the hospital there were lady probationers, who paid one guinea a week. The sisters came on duty at 8 A.M. and left at 11 P.M. They were actually on duty about eleven hours daily. They had passes for two hours during four days of the week. No sisters were employed during the night, but a night superintendent was constantly going round the wards. The sisters had three weeks' holiday each year, and a day off each month. The staff nurses came on duty at 7.30 A.M., and remained on duty till 9 P.M. The actual hours on duty were about ten per day. They had passes for three hours during three days of the week. They had sixteen days' annual holiday, and one day off in each alternate month. The ordinary probationers worked under the same conditions as the staff nurses, but the lady probationers had shorter hours. The probationers received no holiday until they had completed one year.

The Earl of Kimberley: Is that reasonable? We have been told that nurses new to the work are less able to bear the strain than experienced nurses.—Mr. Melhado: It has not been considered necessary to give them a holiday.—The Earl of Kimberley: Have you found many probationers break down in health?—Mr. Melhado: I cannot say that we have. The average number of nurses off duty on account of sickness was a little over two, and of lady probationers, less than one daily. During the last twenty years they had only had nine deaths among their nurses.—The Earl of Kimberley: What is the ground on which you don't employ your most responsible nurses or sisters during the night?—Mr. Melhado: There is never so much to do during the night.—The Earl of Kimberley: Do you think it satisfactory to hand over the patients during the night to what may be termed second-class nurses?—Mr. Melhado replied that the senior nurse was responsible during the night. They had not accommodation for a double supply of nurses. The sisters lived on the same floor as their ward, and were aroused during the night if occasion demanded it. They supplied the public with nurses who had been at least three years in the hospital. Since 1887 the Nursing Institute had been carried on and had been attended with the best results. The authorities of the hospital were perfectly satisfied with the working of the institute. The profit derived from this department went to the funds of the institute, not to those of the hospital.—By Lord Sandhurst: If they had more accommodation it would be desirable to have more nurses in the hospital.—By Lord Cathcart: Tea and sugar were not included in the diet of the hospital; patients had to pay for those commodities. If they could not pay they were supplied gratuitously.—Lord Cathcart: Then your position is different from that of the London Hospital, where the tea is put into one lot and there is a common brew.—By the Earl of Lauderdale: Their gross capital amounted to £252,786 on Jan. 1st of this year. Ten years ago it amounted to £172,000. The increase had been very recent. For many years the capital was a decreasing amount.—By Lord Monkswell: His inquiry as to the means of an applicant was limited to personal interrogation of the applicant. They had no regular system of inquiry which he could put in force.

Mr. Edward Fardon, the resident medical officer at the Middlesex Hospital, said he received a salary of £200, with board and lodging. He had general medical supervision of the hospital so far as the sanitary arrangements were concerned, and was responsible for all the admissions. Within a radius of one mile of the Middlesex Hospital there were eight general hospitals and a large number of special hospitals. In this area there were over 2000 beds in thirty-four hospitals and seven dispensaries. Those figures did not include poor law infirmaries and dispensaries. The out-patient department of the Middlesex Hospital was inconveniently crowded. Occasionally he had been impressed with the appearance of a patient as indicating his ability to pay for medical treatment, and he had made inquiry, and in the majority of instances, when he had done so, he found they were deserving cases. It rarely happened that he detected any case of gross

abuse of the charity of the institution. He did not think that an inquiry officer would be worth his pay.—By the Earl of Kimberley: On an average 300 out-patients were examined each day. A much smaller number would suffice for instruction. The treatment of the surplus could only be defended on the ground of charity. He regarded it as unfortunate that people should accept hospital relief without feeling that they were paupers. None of the slight cases at the Middlesex Hospital were handed over to advanced students.

Mr. A. Pearce Gould, Dean of the Medical School at the Middlesex Hospital, said that last year they had 127 new entries, including 55 general, 7 dental, and 65 occasional students. On an average there were between 250 and 300 students in attendance. For the full curriculum the fee was £100 if paid in advance, £110 if paid in instalments. The fees yielded about £5000, and the expenses of the school amounted to over £2000.

The Committee afterwards adjourned.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANDREW, HENRY, M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Devon and Exeter Hospital.

ARBUCKLE, H. W., M.D. Aberd., L.F.P.S. Glasg., has been reappointed Medical Officer of Health for Thorne, Doncaster.

BANBURY, G. R. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the North Tawton District of the Okehampton Union.

BLACKLEDGE, W. T., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Nassington District of the Oundle Union.

BRUNSKILL, R. R., M.B., B.Ch. Dub., has been appointed Medical Officer at the Carlisle Dispensary, vice Graham, resigned.

COLLINGRIDGE, W., M.D. Camb., M.R.C.S., has been reappointed Medical Officer of Health for the Port of London.

CRAWFORD, JAMES, M.D., M.R.C.P. Lond. & Irel., L.M., has been appointed Honorary Physician-Accoucheur to the Farringdon General Dispensary and Lying-in Charity, vice J. Tanner, M.D., resigned.

CRITCHLEY, H. G., M.B., C.M., L.R.C.S. Edin., has been appointed Senior House Surgeon at the Ipswich and East Suffolk Hospital.

FRASER, P., M.D. Edin., has been appointed Medical Officer of Health for the Llangefni Urban Sanitary District of the Anglesea Union.

GABE, J. R., M.D. Brussels, M.R.C.S., has been reappointed Medical Officer for the Third District of the Holborn Union.

GÜNTHER, T., M.D. Tubingen, L.R.C.P. Lond., has been reappointed Medical Officer of Health for Hampton-Wick.

HYATT, J. T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of the Workhouse, Shepton Mallet Union, vice B. N. Hyatt, deceased.

JOY, F. W., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Thetford and Rural District.

MADDEN, T. MORE, Obstetric Physician and Gynæcologist to the Mater Misericordiæ Hospital, Dublin, has been appointed one of the Masters of the National Lying-in Hospital.

MARRINER, W. H. L., M.B. Lond., M.R.C.S., has been appointed Medical Officer to the Bourne Valley and Districts Dispensary.

MILBURN, F. L., M.R.C.S., has been reappointed Medical Officer for the Fourth District of the Holborn Union.

MILLIGAN, WILLIAM, M.B., C.M., has been appointed Honorary Assistant Physician to the Manchester Hospital for Consumption.

NAPIER, A. D. LEITH, M.D., F.R.S. Ed., M.R.C.P., has been appointed Physician to Out-patients, Chelsea Hospital for Women, vice H. S. Rutherfoord, M.B., M.R.C.P., resigned.

PINK, THOS., M.R.C.S., has been appointed Medical Officer for the Kingscliffe District of the Oundle Union.

PUGH, J. W., M.R.C.S., has been appointed Medical Officer for the Eastern District of the Parish of Brighton.

READ, M., M.D. Camb., M.R.C.S., has been appointed Medical Officer of Health for Worcester, vice Strange, deceased.

SAUNDERS, W. S., M.D. (U.S.), L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health and Public Analyst for the City of London.

SOUTHWELL, C. H., has been appointed Public Analyst for parts of Holland, Lincolnshire.

SUTTON, F., M.R.C.S., has been reappointed Medical Officer of the Reynard Hospital, Willingham.

WHITCOMBE, P., M.R.C.S., has been appointed Medical Officer of the Hospital at Gravesend.

WRIGHT, T. P., M.R.C.S., has been reappointed Medical Officer of Health for St. Neots, Hunts.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CAMBRIDGE.—Assistant Medical Officer for the Cambridge Friendly Societies' Medical Association. (Apply to the Secretary, 20, Mawson-road, Cambridge.)

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon. Salary £40 per annum, with board and apartments.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—House Surgeon. Salary £100 per annum, with board and residence in the hospital.

GENERAL HOSPITAL, Birmingham.—Resident Medical Officer. Salary £130 per annum, with residence, board, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—A Casualty Officer, who will be required to act as Registrar and Assistant Anæsthetist. Honorarium at the rate of 50 guineas per annum.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Surgeon to the Out-patients of this Hospital.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Westminster, S.W.—Surgeon.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—House Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Surgical Registrar for one year. Honorarium of £40 at the end of the term.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Junior House Surgeon. Salary 60 guineas per annum, with board and residence.

LUTTERWORTH UNION.—Medical Officer for No. 6 District. Salary £20 per annum, with the usual extra medical fees as allowed under the orders of the Local Government Board. (Apply to the Clerk to the Guardians, Lutterworth.)

NATIONAL DENTAL HOSPITAL, 149, Great Portland-street, W.—House Surgeon. Salary £50 per annum.

NEWCASTLE-ON-TYNE DISPENSARY.—Resident Medical Officer. Salary £250 per annum, with furnished residence.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. No salary, but board, apartments, and washing provided.

OWENS COLLEGE, Manchester.—Demonstrator in Pathology. The stipend is £140 per annum.

PAROCHIAL BOARD OF FETTERCAIRN.—Medical Officer. (Apply to Dr. Prain, Fettercairn.)

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—Assistant House Surgeon. Salary £30, with board and washing.

ROYAL SOUTH LONDON DISPENSARY.—Surgeon in Ordinary. (Apply to Dr. Nundy, at the Dispensary, St. George's-cross, S.E.)

ROYAL VICTORIA HOSPITAL, Bournemouth.—House Surgeon and Secretary. Salary £80 per annum, with board.

SALFORD UNION.—A Visiting Medical Officer. Salary £150 per annum.

SALFORD UNION.—Two Resident Assistant Medical Officers for the Union Infirmary, Hope, near Eccles. Salary £130 per annum each, with furnished apartments in the infirmary.

ST. THOMAS'S HOSPITAL, Westminster.—Surgeon.

UNIVERSITY OF GLASGOW.—Examiners in Medicine. The annual fee to each of the Examiners is £30. Term of office in each case is four years.

WEST BROMWICH DISTRICT HOSPITAL.—Assistant House Surgeon for six months. No salary, but board, lodging, and washing in the hospital.

Births, Marriages, and Deaths.

BIRTHS.

HEWITT.—On Feb. 8th, at Oakleigh, Northwich, Cheshire, the wife of Dr. David Basil Hewitt, of a son.

NEWBOULD.—On Feb. 5th, at Abbots Bromley, Staffs, the wife of Newton J. Newbould, L.R.C.S., L.R.C.P. Edin., of a daughter.

STONER.—On Feb. 6th, at Rio Lodge, Brighton, the wife of Charles Berrington Stoner, D.D.S., L.D.S., of a son.

TERRY.—On Feb. 3rd, at Hope House, Tangier, Morocco, the wife of C. L. Terry, B.A., M.B., C.M., of a son.

MARRIAGES.

BULLIVANT—BUTLER.—On Feb. 4th, at St. John's, Mansfield, Samuel Bullivant, M.R.C.S., L.R.C.P., youngest son of Mr. J. T. Bullivant, of Ashgrove, Edwinstowe, to Ethel Mary Godber, younger daughter of Mr. Arthur J. Butler, Dale Close.

MORTON—GOODCHILD.—On Feb. 7th, at St. Mark's Church, Hamilton-terrace, by the Rev. Canon Duckworth, D.D., assisted by the Rev. G. Ward Saunders, R.A., and the Rev. Edward Bate, B.A., Edwin Morton, M.D., of Redditch, son of the late Vicar of Welton, Staffs, to Anne Emily, youngest daughter of the late John Goodchild, Esq., of Chelsea and Barwell Court, Walton-on-Thames.

SCHACHT—CHAPMAN.—On Feb. 10th, at St. Jude's Church, South Kensington, Frank Frederic Schacht, M.D., to Agatha Louisa, eldest daughter of Robert Barclay Chapman, C.S.I.

DEATHS.

DAWSON.—On Feb. 6th, at 9, Arundel-terrace, Brighton, Richard Dawson, M.D. Edin., L.R.C.P. Lond., M.R.C.S. Eng., aged 75.

MARTYN.—On Feb. 9th, at Ashleigh, S. Columb, Cornwall, Thomas Darke Martyn, M.R.C.S. Eng., aged 81.

RAYNES.—On Feb. 7th, at Church-street, South Normanton, S. H. Raynes, L.R.C.P. Lond., M.R.C.S.

SAWTELL.—On Feb. 4th, at Villa Espérance, Costebelle, Hyères, France, Tom Henry Sawtell, M.D. Lond., M.R.C.P., aged 39.

SIMMS.—On Jan. 6th, at Twickenham, suddenly, of apoplexy, Frederick Simms, M.B. Lond., M.R.C.P., of 6, Mandeville-place, Manchester-square, aged 56.

STORER.—On Feb. 6th, at Lowdham Grange, Notts, Charles Storer, M.D., J.P., aged 78.

STRICKLAND.—On Feb. 8th, at Royal Naval Sick Quarters, Portland Henry George Travers Strickland, M.B., Staff Surgeon R.N., aged 38.

TURNER.—On Feb. 6th, at Egremont, Thicket-road, Anerley, S.E., Dr. Arthur Newman Turner, aged 49.

WARREN.—On Jan. 31st, at Exmouth, S. Devon, Henry Charles Warren, M.R.C.S. Eng., L.S.A. Lond., aged 63.

WOTHERSPOON.—On Feb. 10th, at Brampton, Cumberland, Thomas Allan Wotherspoon, M.D., L.R.C.S. Edin., and J.P., aged 43.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 12th, 1891

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 6	30·64	W.	41	40	53	49	39	..	Overcast
,, 7	30·55	S.W.	46	45	..	48	41	..	Foggy
,, 8	30·42	N.E.	42	41	..	45	41	—	Overcast
,, 9	30·40	E.	38	38	..	42	37	..	Overcast
,, 10	30·29	W.	35	34	59	44	34	..	Overcast
,, 11	30·35	S.W.	35	34	76	51	34	..	Hazy
,, 12	30·32	N.W.	45	42	66	47	35	..	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

PERSISTENT DANDRUFF.

A CORRESPONDENT writes from the General Hospital, Madras: "Seeing an article on 'Persistent Dandruff,' by Dr. Blake, in your issue of Dec. 27th, 1890, it may interest you to know that a perfect cure has in my case resulted from following the directions given in your correspondence columns more than eleven years ago. The letter I allude to was signed 'Purnell Purnell,' and dated from Streathamhill, May 6th, 1879. I have always felt most grateful for the relief obtained."

Mr. W. J. Evans.—1. A first-class Leitz microscope, with 12th oil immersion, a 7th and a 2-3rd inch, with Abbe illuminator, nose-piece, &c. (an excellent instrument for bacteriological work) may be obtained for £17 10s.—2. Reichert's and Leitz's microscopes are good.

Dr. A. F. Elliott.—The Society for the Relief of Widows and Orphans of Medical Men, 20, Hanover-square, W.; British Medical Benevolent Fund, Secretary, Mr. E. East, 16, Upper Berkeley-street, W.

HARD TIMES IN THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—I must apologise for trespassing on your valuable columns for the purpose of dealing with so long-vexed a question as the above; but having seen some correspondence on the matter a short time since, I should just like to say a few words.

That the medical profession is both an honourable and charitable calling cannot be denied, the large numbers that are constantly enlisted into its ranks being the sole cause of its present unhappy state. Whilst travelling through various parts of England I have had repeated opportunities of observing the various devices of the so-called "penny doctor" of obtaining practice. One gentleman, who holds the M.D. degree of a Scotch university and was lately house surgeon of a provincial hospital, has a huge signboard on the front of his house, stating that he treats free of charge to the poor on certain days all diseases of the lungs, blood, liver, kidneys, and many other ailments which are too numerous to mention. To those who are in better circumstances he makes the modest charge of 2*d.* for advice and medicine. In another district is to be found the doctor who rents a shop with two large plate-glass windows elaborately painted in gold letters, stating that it is a "Hospital for Women and Children, free to the deserving poor" on certain days. So long as we have this sort of man amongst us we need never hope to keep up the dignity of the profession or abolish the quack with his various forms of unskilled practice, and hard times will still remain among some of us who try to work conscientiously and with all decorum due to our learned profession.

I am, Sirs, yours obediently,

February, 1891. AN OBSERVER.

EXPLOSION OF RELIGIOUS MANIA NEAR PALERMO.

A TRAGEDY, unique (say our Italian contemporaries) in the annals of criminal lunacy, has just been enacted at Mezzoinso, in the province of Palermo. On the night of the 21st ult. the family of a peasant named Carnesi, consisting of three young women and two boys, became suddenly maniacal, and left their home in a wild storm, vociferating loudly, in quest of the nearest church. The village authorities immediately put the unhappy creatures under restraint, the boys being closely guarded under their father's roof, while the young women were watched by the relatives to whose charge they were entrusted, and the preliminaries to their all being sent to the Manicomio of Palermo were at once proceeded with. On the evening of the 22nd one of the young women, a fine girl of eighteen, rose from bed, and, having awoke her relatives, assured them that the Lord had worked a miracle on her brother Biagio. She took off her earrings, suspended them from a crucifix on the wall, and by dint of entreaty prevailed on the superstitious elders to accompany her to her father's house, where Biagio was being guarded. Arrived there, she got the whole household to kneel down, and then, without a note of warning, she seized a heavy piece of wood, and dealt a series of violent blows on her brother's head, her strength appearing to be redoubled at sight of the blood that flowed freely from his wounds. In a few minutes the wretched boy was a corpse, whereupon, with the cries and gestures of an infuriated beast of prey, she set upon his lifeless body, and with hands and teeth emasculated him (*evirò il cadavere*). The relatives and guardians of the boy, paralysed with superstitious fear, looked on at the horrid deed without raising a hand to prevent it. The village authorities, on being informed of the occurrence, put the girl into confinement, and all those who witnessed the scene under arrest. *Tantum religio potuit suadere malorum!*

Brux. might make application to the Secretary of the Brussels Medical Graduates' Association—Dr. Steele, 1, Florence-terrace, Ealing.

"CONSTIPATION AND GASTRIC DISEASE."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent "Rustic L.R.C.P.," who, in your last issue, asked for suggestions for treatment, I beg to submit the following, and shall be glad to hear if it has been of any service:—

As this is a chronic case and apparently due to torpidity of the muscular coat from over-distension &c., I think the rational indications would be the use of nervo-muscular intestinal stimulants, preceded by complete evacuation as by colocynth and blue pill (unless contra-indicated, or by injectio glycerini c. res. jalapa (Hockin), so as to thoroughly empty the gut, and repeated every few weeks for a time. Then a mixture of belladonna (for its action on the inhibitory intestinal nerves), strychnia (to relieve spasm, &c.), and if anæmia be present ferrum tart. or ferri et ammon. cit., with or without bismuth. subnit, twice a day. A pill containing pepsin. sacch., gr. i.; bismuth. subnit., gr. iss.; strych., gr. $\frac{1}{60}$; ext. belladonn. tr., gr. $\frac{1}{60}$; ipecac., gr. $\frac{1}{60}$. One or two of these pills at midday. Leave out ipecac. if any special cardiac weakness exists. A pill containing aloin, gr. $\frac{1}{4}$; strych., gr. $\frac{1}{60}$; belladonna, gr. $\frac{1}{4}$; cascara sagrada, gr. $\frac{1}{2}$; every night, or one of the simplest and best senna and sulphur in the form of the p. glycyrrhizæ co., German Phar. If aloin and cascara in combination or senna and sulphur be unsuitable or fail, try the simple soda bicarb. exsic. and p. rhei, gr. iii of each every day before the midday meal. Encourage a regular habit; diet, digestion, and liver attended to; and ensure sufficient muscular exercise, mental relaxation, and other hygienic provisions. Avoid hot fluids, tea and coffee, and stimulants, excepting, if necessary, very dry iced champagne.

I am, Sirs, yours truly,

Feb. 10th, 1891. VON.

DIABETIC MYOPIA.

Ophthalmologist.—Dr. Hirschberg has recently pointed out that diabetes, when it occurs in old persons, frequently induces changes in the lens which, though not sufficient to cause a cloudiness, are nevertheless capable of inducing a very perceptible degree of myopia. In some cases where this myopia exists the commencement of lenticular cataract may also be detected.

Cyclops.—By law the coroner is obliged to pay the fees of medical witnesses as soon as the inquest is over. In the event of his refusing to do so he could be sued, or the matter might be referred to the Home Secretary.

"'FUCHSINE BODIES' IN TUBERCULOSIS OF LUNG."

To the Editors of THE LANCET.

SIRS,—I observe a few printer's errors in my letter on the above subject published in your impression of last week. The errors, though they may appear insignificant, yet alter the meaning considerably. They are:—1. In line 13, the misplacement of the comma, which ought to come between the words "area" and "on" in the line above. 2. In line 29, the substitution of the word "place" for *placed*. 3. In line 36, omission of a comma between the words "acid" and "after," and the placing of a period after the word "minutes."

I am, Sirs, yours faithfully

Feb. 9th, 1891. G. CARRINGTON PURVIS.

A QUESTION OF PRIORITY.

UNDER the heading "The Truth at Last" the *Times and Register* (Jan. 29th) maintains that Dr. Dixon's discovery of the prophylactic value of sterilised cultures of the tubercle bacillus is a clear anticipation of Prof. Koch's work. But Dr. Dixon did "not consider his lymph an agent that could be usefully and safely employed on man, and this is his opinion to-day." It is concluded that "Koch deserves great credit for his acuteness in recognising the importance of Dixon's work, and for his boldness in extending the use of the lymph to the treatment of tuberculosis in man."

Mr. F. Sánchez.—1. Any of the large general hospitals to which medical schools are attached.—2. Surgery—Erichsen; Operative Surgery—Stimson, Heath; Practice of Medicine—Hilton Fagge; Therapeutics—Ringer, Hale White.

"A MEDICAL HAT."

To the Editors of THE LANCET.

SIRS,—It seems to me that the suggestion of your correspondent in to-day's issue, that medical men should wear a distinguishing hat, is one which commends itself to everybody. I would, however, suggest that as conspicuousness seems to be an object of your correspondent, it is a pity to adopt a hat with a low crown. Why not have one with a decided length of cylinder—let us say three feet long? It would be so readily discerned at a distance. Further, in order to render the doctor still more easily recognised, I would propose to have the tile painted sky-blue and varnished, or decorated in any other manner to suit the taste of the wearer, after the style of the gentlemen of the ring on the racecourse. And while on this subject, why limit oneself to a hat? A fancy dress or a Pickwickian costume would look picturesque, and, I am sure, would not fail to attract the attention of strangers and others who might be requiring the services of a medical man. The subject is one that is capable of vast extension, and I doubt not would be readily adopted if properly brought to the notice of the leading members of the profession.

I am, Sirs, yours faithfully,

London, Feb. 7th, 1891. G. W.

SELF-MUTILATION BY AN IMBECILE.

THE *Revista Médica* mentions that a short time since a poor half-witted man walked into the hospital of San Vicente de Paul, in Santiago (Chili), carrying his testes wrapped up in a piece of paper. No information could be obtained from him or from other sources as to how he had been mutilated. On examination a small aperture was found in the left side of the scrotum, through which both testes had apparently been dragged, and separated from the cord and vessels as high as possible. Notwithstanding some hæmorrhage and other troubles the man did well.

M.R.C.S. will see that the hard times in Scotland are all a joke. If he will alter his letter to suit the circumstances as explained elsewhere, we shall be glad to insert it.

Enquirer.—Heidenhain's "Animal Magnetism," Charcot, Bernheim, Liebault, Lloyd Tuckey.

A WARNING.

To the Editors of THE LANCET.

SIRS,—I shall be glad if you will allow me, through your columns, to warn others against a person calling himself a medical man and former student of St. Thomas's, under the name of Charles Huthwaite. I cannot find that name in any of our books; and the only medical man of that name to be found on the Register or in the Medical Directory died in 1883. I think it right to trouble you with this letter because the person I refer to is in possession of a sheet of note-paper from my waiting room, stamped with my address, on which he appears, after leaving me, to have written my name, and the names of some of my colleagues previously visited, together with an exaggerated statement of the sum given to him by each (in reality only a few shillings). This paper he has, as I have since learned, been using in order to extort larger gifts from another colleague.—I am, Sirs, yours faithfully,

Wimpole-street, W., Feb. 11th, 1891. E. NETTLESHIP.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Lauder Brunton, London; Dr. Cullingworth; Dr. W. Duncan; Sir Spencer Wells, London; Mr. Tweedy, London; Dr. Althaus; Mr. Braxton Hicks, London; Dr. Steavenson, London; Dr. J. H. Garrett, Stoke Newington; Mr. J. H. Morgan, London; Mr. Parker; Dr. Stopford Taylor, Liverpool; Mr. Armstrong, Pontesbury; Dr. Macnaughton Jones, London; Dr. Lowe, Lincoln; Mr. Cautley, London; Mr. Greig Smith, Bristol; Dr. D. E. Anderson, Paris; Dr. Lange; Mr. Clement Lucas, London; Dr. Scattergood, Leeds; Mr. Mugford; Mr. Reginald Harrison, London; Mr. Warner, Sheffield; Messrs. Smith, Elder, and Co., London; Messrs. Livingstone, Edinburgh; Messrs. Blondeau et Cie., London; Dr. McEwan, Prestonpans; Mr. Hordley, Stoke-upon-Trent; M. Berthier, Paris; Mr. Hornibrook; Mr. Hunter, Edinburgh; Mr. Bladen, Staffordshire; Dr. Cobbett, Beckenham; Dr. C. Boyd, Denmark-hill; Mr. Cheesbrough, Brampton; Dr. E. Robinson, Birmingham; Mr. Burdett, London; Mr. Jessett, London; Dr. Little, London; Dr. Leeson, Twickenham; Dr. Andrew, London; Dr. Nias, London; Dr. Muirhead, Edinburgh; Mr. Coles, London; Dr. Imlach, Liverpool; Dr. Snow, Bournemouth; Dr. Charlotte Ellerby, London; Dr. Harrison, Lincoln; Dr. Grün; Mr. Truman, Reading; Dr. Mayo Robson, Leeds; Mr. W. A. Lane, London; Messrs. Richardson and Co., Leicester; Mr. H. Sewill, London; Dr. C. Purvis; Mr. Alban Doran, London; Mr. Dickinson-Leigh, Jarrow; Messrs. Walker and Weller, Malvern; Dr. J. B. Harris, Norwood; Dr. Hamilton, East Dulwich; Mrs. Scott, Madras; Mr. Cauty, Liverpool; Messrs. Keene and Co., London; Mr. Sanchez, Norwood; Messrs. Greenberg and Co., London; Dr. T. Oliver, Newcastle-on-Tyne; Messrs. Roberts and Jones; Mr. Cavendish, London; Dr. Smellie, Jarrow; Messrs. Elton and Co., London; Dr. Drummond, Newcastle-on-Tyne; Dr. Keith Napier, London; Surgeon-Major Parakh, Bombay; Messrs. Reid and Donald, Perth; Dr. R. J. Lee; Dr. H. Davy, Exeter; Messrs. Crossley and Co., London; Mr. W. Gardner, Adelaide; Messrs. Cassell and Co.; Dr. Rentoul, London; Dr. Blake, London; Dr. Paris, Sierra Leone; Dr. Towers-Smith; Dr. Ashby, Manchester; Mr. Laban, West Bromwich; Dr. Steele, Algeria; Mr. Hawkes, London; Dr. Ziffer, Budapest; Mr. Considine, Ennis; Mr. Bryant, London; Mr. Gurner, Pall Mall; Mr. Stiff, Birmingham; Mr. Girling, Halifax; Dr. Giffard, Brighton; Mr. Carter, Liverpool; Mrs. Shipley, Stockton; Mr. E. Nock, London; Mr. Morillier, Rotherhithe; Mr. C. Müller; Dr. A. Mills, Brussels; Mr Nettleship, London; Mr. F. J. Davies, Abercarn; Mr. Hope, London; Mr. Woodcock, Bradford; Dr. Sutherland, Whitehall; Dr. Favrat, Madeira; Miss Davies, Liverpool; Mr. Sell, London; Mr. Aveling, London; Mr. Marsden, Hornsey; Mr. Merck, Darmstadt; Mr. Mungall, Glasgow; Mr. Gravatt, London; Mr. C. J. Bond, Leicester; Mr. Feeny; Mr. C. G. Campbell, Saddleworth; Mr. P. Parker, Bradford; Astragalus, London; Secretary, General Hospital, Cheltenham; M.R.C.S.; G. W.; R. H. F.; Secretary, Royal Victoria Hospital, Bournemouth; Enquirer; Anthracosis, London; A. R. Z., London; M.B., C.M.; M.D., Hampstead; M.A., London; Assistant, London; Secretary, Cambridge; Delta, London; D., London; M.D., London; Astonished; Surgeon; A.; Bachelor, London.

LETTERS, *each with enclosure*, are also acknowledged from—Messrs. Lee and Nightingale, Liverpool; Dr. Marsden, London; Messrs. Sharp and Co., Glasgow; Dr. Jennings, Manchester; Miss Rogers, Colwyn Bay; Dr. Duke, Eastbourne; Dr. Owen, Gloucester; Messrs. Slinger and Son, York; Mr. Mitchell, Taunton; Messrs. Hazell, Watson, and Viney, London; Dr. Giacomo, Naples; Messrs. Richardson Bros. and Co., Liverpool; Mr Lockwood, Huddersfield; Mr. Garlike, Ealing Dene; Dr. Pogson, Durham; Mr. Tully, Hastings; Messrs. Wyleys and Co., Coventry; Mr. Cross, Ormesby; Miss Montgomery, North Wales; Mr. Bush, Bath; Mr. Howells, Aberdare; Messrs. Findlater and Martin, Edgeware; Dr. Harries, Sussex; Messrs. Burroughs and Co., London; Col. Dashwood, Loughboro'; Messrs. Woolley, Sons, and Co., Manchester; Mr. Mackenzie, Musselburgh; Mr. Aspinall, West Kirby; Mr. Duncan, Aberdeen; Mr. Cook, Totnes; Mr. Craig, Wick, N.B.; Mr. Cooper, Bristol; Mr. Pickett, Notting-hill; Mrs. Godfrey, Northampton; Dr. Ritchie, Otley; Mr. Butlin, London; Mr. Tyte, Minchinhampton; Mr. Chapman, Horsley; Mr. A. C. Coles, Bournemouth; Mr. J. Carter, London; Mr. McLay, Rothesay; Mr. Brice, Scarboro'; Mr. Hammett, Taunton; Mr. Twyford, Hanley; Mr. R. Davis, London; Mr. Philips, Windsor; Mr. Crisp, Nottingham; Mr. T. Smith, Fleet-street; Dr. E. B. Reckitt, Boston; Mr. Brown, Highgate-hill; Mr. Griffiths, Cambridge; Mr. Owen, Fishguard; Mr. Trimble, Enniskillen; Mr. Atherley, Rhyl; Mr. Grote, Cardiff; Mr. Clowes, Colchester; Dr. Windle, Halifax; Mr. Baker, London; Messrs. Mann and Son, London; Mr. Cochrane, Wigtonshire; Messrs. Perkins and Co., London; Dr. Hooper, Ripley; Mr. O'Neilly, Tuam; Dr. Fox, Child's Hill; Mr. Hoffmann, Swansea; Mr. Sargant, Ramsgate; Dr. Leckie, Pontypridd; Mr. Piggott, Cambs; Dr. Gordon, Witheridge; Mr. Thin, Edinburgh; Mr. Brown, Streatham; Mr. Heywood; Mr. Kelvin, Manchester; Davies, Pontypridd; B., London; M.D., London; Hackney Furnishing Co.; General Hospital, Birmingham; Jeyes' Sanitary Compounds Co., London; W. B., Finsbury-circus; Secretary, Western Medical School, Glasgow; Assistant, London; V. V. V.; St. John Ambulance, London; Irrigation, London; A. C. E., Southport; Nurse Farrington, Ireland; Delta, London; Vere; Manager, *Leeds Mercury* Office; M.D, Bideford; Graduate, London; R. A., London; Sister Musgrave, Bolton; C. S., Manchester; Chiswick, London; J. L. K., London; Cromwell House, Northallerton; Country, London; E. B., Southampton; J. A. B., London; X. Y. Z., London; C. B. O.; A. C. G., London; Secretary, Deaconesses' Institute, Tottenham; Medicus, Leicester; Mr. D., Earl's-court; Malton, London; Hon. Sec., Kenilworte; Medicus, Clapton; Thane, London; E. A., London; Index, London; Beta, London; B., London; Z., Manchester; A. W. H., Norfolk; T. H. L., Brixton.

NEWSPAPERS.—*Lincolnshire Chronicle, Birmingham Daily Post, Bristol Mercury, Scottish Leader, Yorkshire Post, Dundee Advertiser, Northern Whig, Liverpool Courier, Leeds Mercury, Eastern Press (Norwich), Bath Gazette, Sussex Advertiser, Montreal Herald, Lincoln Mercury, Windsor and Eton Gazette, Hertfordshire Mercury, Insurance Record, Reading Mercury, Mining Journal, Windsor and Eton Express, West Middlesex Advertiser, Architect, Law Journal, Spectator, Surrey Advertiser, West Middlesex Standard, Berwickshire News, Westminster Times, Pioneer, Birmingham Daily Gazette, Lincoln Gazette, Bury Post, East Anglian Times, Observer, Leicester Daily Post, Oldham Standard, Hastings Independent, Dewsbury Reporter, Essex Standard, Grantham Journal, North Devon Herald, Cheltenham Examiner, &c.*, have been received.

Medical Diary for the ensuing Week.

Monday, February 16.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: Diseases of the Iris.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. W. R. H. Stewart: Otorrhœa.

THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. J. W. Bond: Post Nasal Growths. (Post-Graduate Course.)

SOCIETY OF ARTS.—8 P.M. Mr. Gisbert Kapp: The Electric Transmission of Power. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Dr. Herringham: Asthma in a Boy.—Mr. Paget: Strangulated Hernia, Gangrene of Bowel, recovery with a fistula.—Dr. Ewart and Mr. Bennett: Dexio Cardia (without transposition of other viscera) and Bronchiectasis, pulmonary incision and resection of rib for the latter.—Dr. Rivers (for Dr. Jackson): A case of Treadler's Cramp.—Mr. Edmund Owen: Amputation of Both Mammæ for Scirrhus.—Sir Hugh Beevor: (1) Malformation of Heart, Defect of Ventricular Septum; (2) Defective Development of Abdominal Parietes, Respiration entirely Costal.—Dr. Ewart: A case of Situs Inversus Viscerum.—Mr. Sheild: Loose Body in Knee-joint of unusual size.—Mr. Allingham: Case after Trephining.—Dr. Campbell: Lupus cases under Koch's Treatment.—Dr. de Havilland Hall: (1) Raynaud's Disease; (2) Addison's Disease; (3) Bronchocele.

Tuesday, February 17.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: General Paralysis of the Insane, Epilepsy.

ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.

SOCIETY OF ARTS.—4.30 P.M. Commander V. Lovett Cameron: Chartered Companies in Africa.

ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Thorne Thorne: Diphtheria, its Natural History and Prevention.

ROYAL STATISTICAL SOCIETY (Lecture Theatre, Museum of Practical Geology, Jermyn-st., S.W.). 7.45 P.M. Dr. Arthur Newsholme: The Vital Statistics of Peabody Buildings and other Artisans' and Labourers' Block Dwellings.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Professor W. H. Corfield: Sanitary Appliances.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Job Collins: Hypertrophied Kidney, with Dilated Pelvis.—Mr. S. Paget: Imperforate Rectum.—Dr. W. Ord: Aneurysm of the Aortic Arch opening into the Superior Cava.—Mr. Bland Sutton: Cervical Teeth.—Mr. B. Pitts: Columnar-celled Carcinoma of Humerus Secondary to Carcinoma of Rectum.—Mr. J. R. Lunn: Carcinoma of Kidney.—Mr. J. J. Clarke: Effects of Intra-uterine Pressure on the Fœtus.—Mr. W. G. Spencer: Exophthalmic Goitre in a Girl, causing death by Asphyxia. Card Specimens by Dr. W. Hadden, Mr. G. H. Makins, and Mr. S. G. Shattock.

Wednesday, February 18.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. R. Maguire: The Pulse, with Demonstrations.—Royal London Ophthalmic Hospital, Moorfields: 8 P.M., Mr. J. B. Lawford: Optic Atrophy.

THROAT HOSPITAL (Golden-sq.).—5.30 P.M. Dr. Greville MacDonald: Neuroses of the Larynx. (Post-graduate Course.)

EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Dr. Louis C. Parkes: The Relations of Saprophytic to Parasitic Micro-organisms.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Dr. W. B. Benham: Eminia Equatorialis, a New Earthworm from Equatorial Africa.—Mr. T. B. Rosseter: Cysticercus of Tænia Coronula Duj.

SOCIETY OF ARTS.—8 P.M. Col. Sir Charles Wilson: Methods and Processes of the Ordnance Survey.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Dr. Louis Parkes: Model Dwellings in London, and Overcrowding on Space. The paper will be followed by a Discussion.

Thursday, February 19.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Buzzard: Selected Cases.—Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Dr. M. Lubbock: Anomalies of Speech in Children and their Treatment.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Mr. G. Stoker: Chronic Glandular Disease of the Pharynx and Naso-pharynx.

ROYAL INSTITUTION.—3 P.M. Professor C. Hubert H. Parry: The Position of Lulli, Purcell, and Scarlatti in the History of the Opera (with Musical Illustrations).

ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Thorne Thorne: Diphtheria, its Natural History and Prevention.

Friday, February 20.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CANCER HOSTITAL (Fulham-rd., S.W.).—4 P.M. Dr. F. A. Purcell: Cancer of Tongue and its Treatment.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. R. Maguire: Pulmonary Cavities.

SOCIETY OF ARTS.—4.30 P.M. Capt. Abney: The Science of Colour.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. J. Wright Clarke: Details of Plumbers' Work.

ROYAL INSTITUTION.—9 P.M. Dr. E. E. Klein: Infectious Diseases, their Nature, Cause, and Mode of Spread.

Saturday, February 21.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: The Different Forms of Lupus.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.

ROYAL INSTITUTION.—3 P.M. The Right Hon. Lord Rayleigh: The Forces of Cohesion.

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